

DRAFT
July 24, 2012

BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT

Groundwater Management Plan

Adopted – _____

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I. DISTRICT MISSION AND OBJECTIVES

The Brush Country Groundwater Conservation District (“District”) strives to preserve and protect the groundwater resources within its boundaries. The District recognizes that groundwater conservation districts are the state’s preferred method of groundwater management and will work with local stakeholders towards achieving its objectives. The District will accomplish its objectives by working to lessen interference between water wells, minimize drawdown of groundwater levels, prevent the waste of groundwater, and reduce the degradation of groundwater quality within the District while helping the local economies maintain and improve their current condition. The District will also use the authority granted in its Enabling Act and applicable state laws to protect and maintain the groundwater resources of the District.

II. PURPOSE OF GROUNDWATER MANAGEMENT PLAN

The purpose of this Management Plan is to provide a planning tool for the District as it works to manage, protect, and conserve the groundwater resources within its boundaries. This Management Plan currently contains the hydrogeological and technical information provided by the Texas Water Development Board (“TWDB”) for the groundwater resources of the District. As the District obtains more site-specific groundwater information, the District will update and amend this Management Plan as necessary.

The development of the District’s Management Plan will enable the District to comply with the requirements of state law. The Texas Legislature created a statewide water planning process with the passage of Senate Bill 1 (“SB 1”) in 1997, Senate Bill 2 (“SB 2”) in 2001, and Senate Bill 3 (“SB 3”) in 2007. The development of management plans by each groundwater conservation district in Texas is an integral part of the statewide water planning process. The District's Management Plan satisfies all the requirements established for groundwater conservation districts by SB 1, SB 2, SB 3, the requirements Chapter 36 of the Texas Water Code, and the requirements under TWDB rules.

III. DISTRICT INFORMATION

A. District Creation.

The District was created by the 81st Texas Legislature, Regular Session, in 2009 with the enactment of Senate Bill 2456 (attached to this plan as “Appendix A” now codified as Chapter 8852 Texas Special District Local Laws Code). The creation of the District was confirmed by the citizens located within the District’s boundaries in Jim Hogg, Jim Wells, Brooks, and Hidalgo Counties at an election held on November 3, 2009. The District contains the authority and responsibilities specified in its Enabling

Act, Chapter 36 of the Texas Water Code, the TWDB Rules, this Groundwater Management Plan, and the District Rules, as they may be amended.

B. District Board of Directors.

The Board of Directors is made up of nine members. The directors for the District are appointed by the Commissioners Courts of Jim Hogg, Jim Wells, and Brooks Counties. The Commissioners Court of Brooks County must appoint one director to represent the municipal interests of the City of Falfurrias and two directors to represent the agricultural interests of the territory in Brooks County that is outside the City of Falfurrias and not within the Kenedy County Groundwater Conservation District and the portion of Hidalgo County within the District. The Commissioners Court of Jim Hogg County must appoint one director to represent the interests of Jim Hogg County within the service area of the Jim Hogg County Water Control and Improvement District No. 2 and two directors to represent the agricultural interests of the area of Jim Hogg County outside the service area of the Jim Hogg County Water Control and Improvement District No. 2. The Commissioners Court of Jim Wells County must appoint two directors to represent the agricultural interests of the area of Jim Wells County outside the City of Alice¹ and not within the Kenedy County Groundwater Conservation District. The Commissioners Courts of both Brooks and Jim Hogg Counties must jointly appoint one director to represent the industrial and mining interests of Jim Hogg and Brooks Counties. District directors serve staggered four-year terms that expire on June 1 of each even-numbered year.

C. Authority of District.

The District has the authority and duties given to groundwater conservation districts by Texas Water Code Chapter 36, 31 Texas Administrative Code (TAC) Chapter 356, and the District's Enabling Act. The District exercises the authority given to preserve and protect the groundwater resources of the District through the adoption and implementation of District rules.

D. Location and Extent of District Boundaries.

The District's boundaries consist of the entire territory within Jim Hogg County, the area within Jim Wells County that is not within the Kenedy County Groundwater Conservation District and outside the corporate limits of the City of Alice², the area of

^{1,2} The District does not include the corporate limits of the City of Alice existing as of January 1, 2009.

Brooks County not within the Kenedy County Groundwater Conservation District, and a portion of northern Hidalgo County. A map of the District is contained in Appendix B.

E. Groundwater Resources of District.

The TWDB has identified the Gulf Coast aquifer as the only major aquifer within the District's boundaries. The TWDB defines major aquifers as aquifers that are capable of producing large yields to wells or that produce groundwater over a large area. The only minor aquifer recognized within the District is the Yegua-Jackson aquifer, which covers a small portion of southwestern Jim Hogg County. Minor aquifers tend to be smaller and produce less water than major aquifers.

A diagram of the Gulf Coast aquifer can be found at Figure 1 below. The TWDB generally describes the groundwater resources of the Gulf Coast aquifer as follows:

The Gulf Coast aquifer forms a wide belt along the Gulf of Mexico from Florida to Mexico. In Texas, the aquifer provides water to all or parts of 54 counties and extends from the Rio Grande northeastward to the Louisiana-Texas border. Municipal and irrigation uses account for 90 percent of the total pumpage from the aquifer. The Greater Houston metropolitan area is the largest municipal user, where well yields average about 1,600 gal/min.

The Gulf Coast aquifer consists of complex interbedded clays, silts, sands, and gravels of Cenozoic age, which are hydrologically connected to form a large, leaky artesian aquifer system. This system comprises four major components consisting of the following generally recognized water-producing formations. The deepest is the Catahoula, which contains ground water near the outcrop in relatively restricted sand layers. Above the Catahoula is the Jasper aquifer, primarily contained within the Oakville Sandstone. The Burkeville confining layer separates the Jasper from the overlying Evangeline aquifer, which is contained within the Fleming and Goliad sands. The Chicot aquifer, or upper component of the Gulf Coast aquifer system, consists of the Lissie, Willis, Bentley, Montgomery, and Beaumont formations, and overlying alluvial deposits. Not all formations are present throughout the system, and nomenclature often differs from one end of the system to the other. Maximum total sand thickness ranges from 700 feet in the south to 1,300 feet in the northern extent.

Water quality is generally good in the shallower portion of the aquifer. Ground water containing less than 500 mg/l dissolved solids is usually encountered to a maximum depth of 3,200 feet in the aquifer from the San Antonio River Basin northeastward to Louisiana. From the San Antonio River Basin southwestward to Mexico, quality deterioration is evident in the form of increased chloride concentration near the coast. Little of this ground water is suitable for prolonged irrigation due to either

high salinity or alkalinity, or both. In several areas at or near the coast, including Galveston Island and the central and southern parts of Orange County, heavy municipal or industrial pumpage had previously caused an updip migration, or saltwater intrusion, of poor-quality water into the aquifer. Recent reductions in pumpage here have resulted in a stabilization and, in some cases, even improvement of ground-water quality.

Brooks County

Excerpts from a TWDB report specific to Brooks County describe the groundwater resources of Brooks County as follows:

The rock formations that contain fresh to slightly saline water are sedimentary deposits of Tertiary and Quaternary age. They include, in order of decreasing age, the Oakville Sandstone, Lagarto Clay, Goliad Sand, Lissie Formation, Beaumont Clay, and recent windblown sand. All formations, except the Oakville and the Lagarto, crop out in Brooks County. The formations consist principally of interbedded sand and clay deposits; the sand constitutes the principal aquifer in the county.

All of the formations containing fresh to slightly saline water in Brooks County are considered to be part of the principal (Gulf Coast) aquifer. The formations are composed of non-marine sand and sandstone interbedded with clay. The sedimentary rocks become finer grained and some beds of sand grade into clay toward the coast. Correlation of individual sand or clay beds is difficult even over short distances because of the heterogenous character of the sedimentary rocks. Because the character of much of the sedimentary rocks comprising the Goliad Sand, Lissie Formation, Beaumont Clay, and windblown sand have similar electrical properties, the geologic sections, which are based on electrical logs, show only the Oakville Sandstone, Lagarto Clay, and Goliad Sand and rocks younger than the Goliad Sand.

The regional dip of the formations in Brooks County is to the east and southeast toward the Gulf. A major fault zone crosses the county along a line from near the southwest corner to the vicinity of Falfurrias. The fault was not observed at the surface. An examination of electric logs of oil wells along and near the fault zone indicates that the displacement decreases toward the surface, and that at shallow depths of less than 1,500 to 2,000 feet, hardly a trace of the fault exists. Consequently, this structural feature does not affect the circulation of groundwater in the county.

Rainfall in Brooks County and adjoining areas is the source of all fresh groundwater occurring in the county. Groundwater in Brooks County occurs under both water-table and artesian conditions, depending on whether the water is unconfined (under atmospheric pressure only) or confined. Water-table conditions usually prevail at shallow depths in the outcrop areas of the aquifers, whereas artesian conditions generally

prevail downdip from the outcrop where the aquifers are overlain by less permeable material. Water in a well penetrating the artesian aquifers will rise to an altitude higher than the bottom of the confining layer. This rise is caused by the pressure from the weight of the water in the updip part of the aquifers and by the pressure from overlying rock formations.²

Southern Jim Wells County

Excerpts from a report addressing the groundwater resources of southern Jim Wells County describes the southern Jim Wells County study area as follows:

The geologic formations that contain fresh to slightly saline water are, in order of decreasing age, the Oakville Sandstone and the Lagarto Clay of Miocene age, the Goliad Sand of Pliocene age, and the Lissie Formation and Beaumont Clay (including barrier island and beach deposits) of Pleistocene age, the south Texas eolian plain deposits of Pleistocene and Holocene age, and the barrier island deposits and alluvium of Holocene age. All of these units are exposed in the report area except the Goliad Sand, Lagarto Clay, and Oakville Sandstone, which crop out in counties west of the report area.

The geologic formations, except the alluvium and south Texas eolian plain deposits, crop out in belts that are nearly parallel to the Gulf Coast. Younger formations generally crop out close to the coast and successively older ones farther inland. Because of the different ages of the formations, the outcrops are progressively eroded and dissected inland. For example, the outcrop of the Beaumont Clay and Lissie Formation, undifferentiated, which covers most of Kleberg County, is comparatively uneroded in contrast to the uneven and dissected outcrop of the Goliad Sand farther inland. The alluvium and south Texas eolian plain deposits transgress the other geologic formations and are elongated mostly normal to the Gulf Coast.

The lithology, dip, and thickness of many of the geologic formations change in the direction of the dip; and the lithology and thickness commonly change laterally along the strike. Sand beds may grade laterally into clay or silt within short distances. These sand beds and other beds containing water are interconnected with similar beds on a different level, so that a series of water-bearing beds within a formation, or even within a group of formations, function as a single aquifer. Both dips and thicknesses of the formations increase gulfward, and the clastic sediments composing the geologic formations grade from fluvial and deltaic sand, silt, and clay in inland areas to

² Groundwater Resources of Brooks County, Texas, U.S. Geological Survey, Texas Water Development Board Report 61, by B.N. Myers and O.C. Dale, October 1967.

predominantly finer sediments that interfinger with brackish and marine sediments near the Gulf Coast and offshore.³

Southwestern Jim Hogg County

A diagram of the Yegua-Jackson aquifer can be found at Figure 2 below. The Yegua-Jackson aquifer is located only in a small portion of southwestern Jim Hogg County. The TWDB generally describes the groundwater resources of the Yegua-Jackson aquifer as follows:

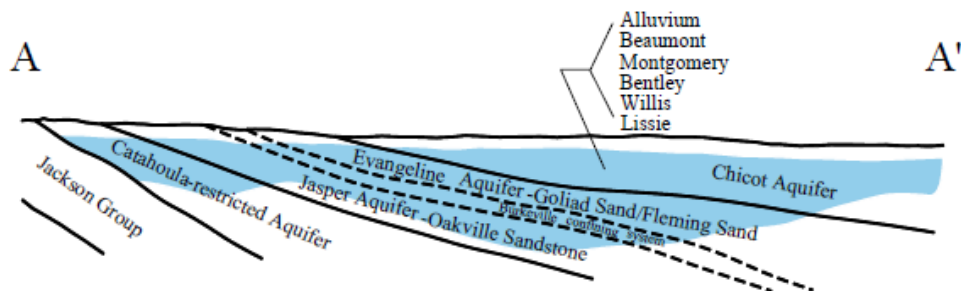
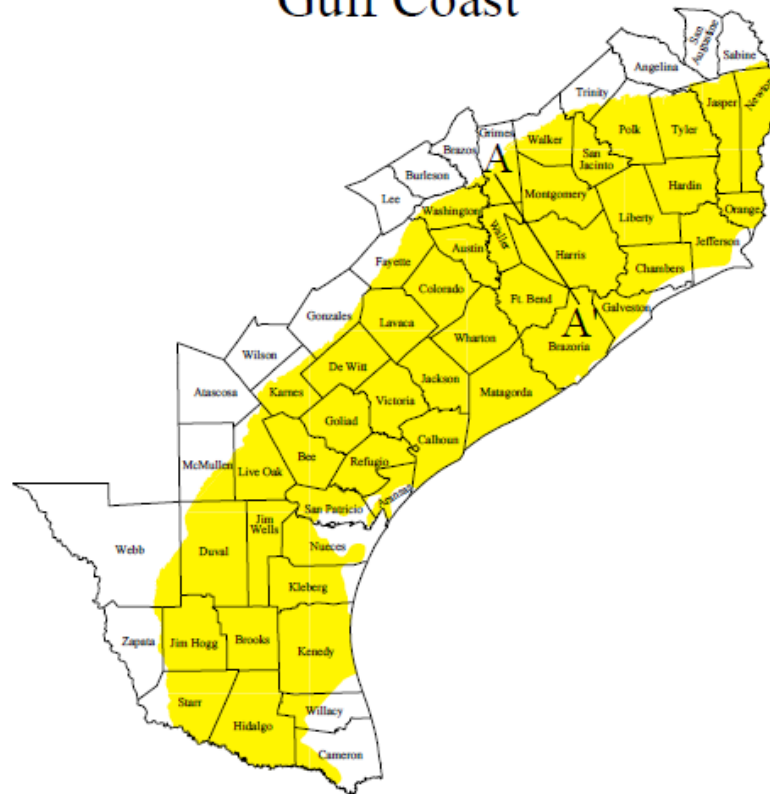
The Yegua-Jackson aquifer extends in a narrow band from the Rio Grande and Mexico across the State to the Sabine River and Louisiana. Although the occurrence, quality, and quantity of water from this aquifer are erratic, domestic and livestock supplies are available from shallow wells over most of its extent. Locally water for municipal, industrial, and irrigation purposes is available. Yields of most wells are small, less than 50 gallons per minute, but in some areas, yields of adequately constructed wells may range to more than 500 gallons per minute. The Yegua-Jackson aquifer consists of complex associations of sand, silt, and clay deposited during the Tertiary Period. Net freshwater sands are generally less than 200 feet deep at any location within the aquifer. Water quality varies greatly within the aquifer, and shallow occurrences of poor-quality water are not uncommon. In general, however, small to moderate amounts of usable quality water can be found within shallow sands (less than 300 feet deep) over much of the Yegua-Jackson aquifer.⁴

³ Ground-Water Resources of Kleberg, Kenedy, and Southern Jim Wells Counties, Texas, Texas Water Development Board Report 173, U.S. Geological Survey, by G. H. Shafer and E. T. Baker, Jr., July 1973.

⁴ Aquifers of Texas, Texas Water Development Board, Report 345, by Ashworth and Hopkins, November 1995.

FIGURE 1

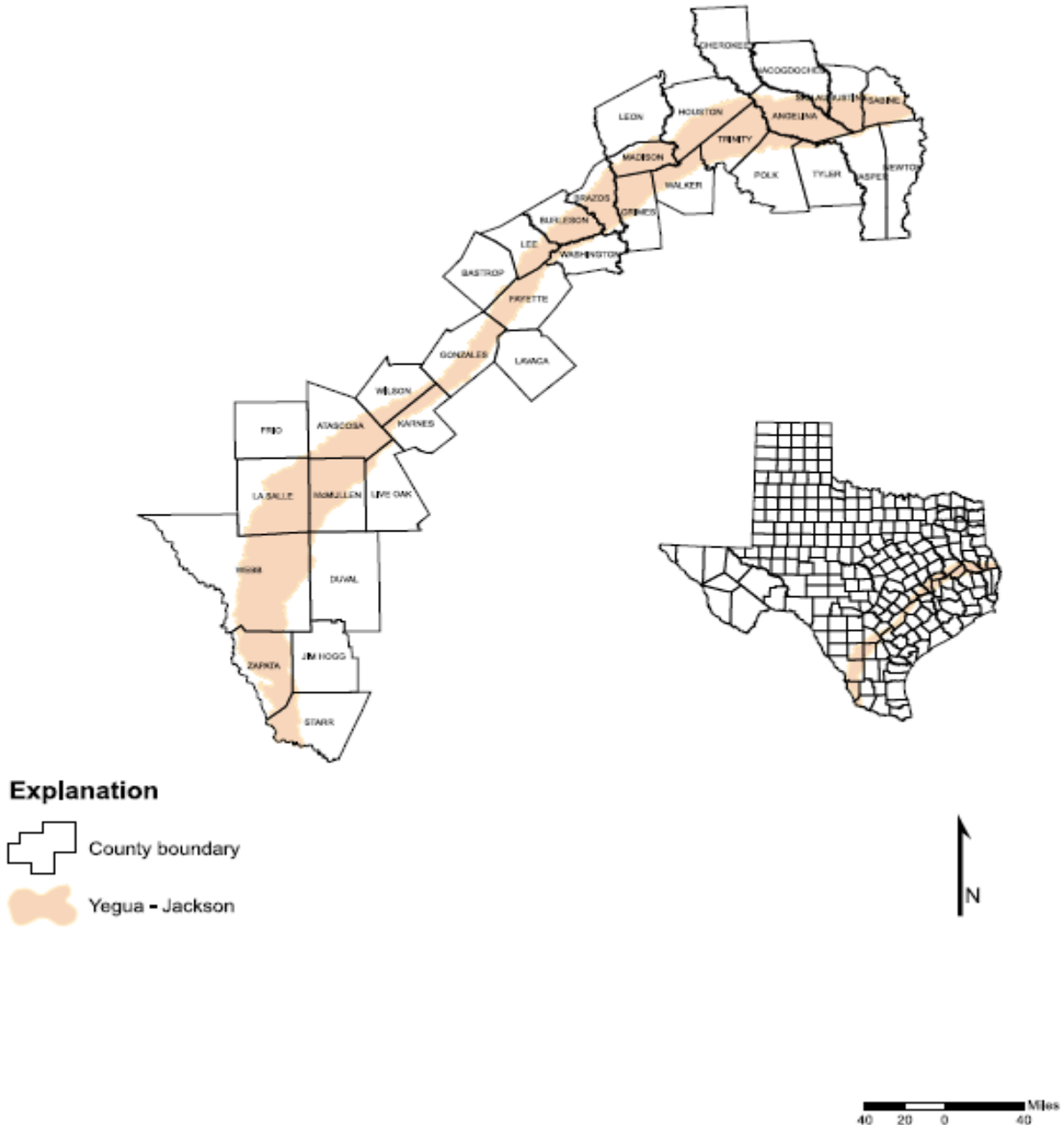
Gulf Coast



Modified from Baker, 1979

FIGURE 2

Yegua-Jackson



IV. CRITERIA FOR PLAN APPROVAL

A. Planning Horizon.

The Management Plan is adopted to be effective for a ten (10) year planning period, which will begin on the date TWDB approves this plan. In accordance with Section 36.1072(e) of the Texas Water Code and TWDB Rules (in 31 TAC §356.3), the District will review and re-adopt its Management Plan, with or without amendments, every five years and will re-submit its Management Plan for TWDB approval after re-adoption. This Management Plan will be effective until replaced by a revised plan that has been approved by the TWDB.

B. Plan Adoption.

Public notices demonstrating that this Management Plan was adopted after the required public hearings and Board meeting are attached to this plan as “Appendix C”.

C. Board Resolution.

A certified copy of the resolution of the Board of Directors of the District adopting this Management Plan is attached to this plan as “Appendix D”.

D. Coordination with Surface Water Management Entities.

The surface water management entities within the District include the Nueces River Authority, the City of Corpus Christi through its ownership of Lake Corpus Christi, and the Jim Wells County Fresh Water Supply District No. 1. Sample correspondence sent to these entities, as well as Region M (Rio Grande Regional Water Planning Area) and Region N (Coastal Bend Regional Water Planning Group) and a list of recipients is attached to this plan as “Appendix E”.

V. ESTIMATES OF TECHNICAL INFORMATION REQUIRED BY 31 TAC 356.5 AND TEX. WATER CODE § 36.1071

A. Modeled available groundwater in the district based on the desired future condition established under Tex. Water Code 36.108 — 31 TAC 356.5 (a)(5)(A) and Texas Water Code § 36.10701(e)(3)(A).

Modeled available groundwater is defined in Texas Water Code § 36.001(25) as the amount of water that “may be produced on an average annual basis to achieve a desired future condition established under Section 36.108.” Under Texas Water Code

§ 36.108(d), the desired future condition may only be determined through joint planning with other groundwater conservation districts (“GCDs”) in the same groundwater management area (“GMA”). The District is located in GMA-16.

On August 30, 2010, the authorized voting representatives of GMA-16 established a DFC of the Gulf Coast Aquifer of a GMA-wide average of approximately 94 feet through 2060 consistent with scenario 10 of GAM Run 09-008.

The following is the GMA-16 drawdown based upon Scenario 10, GAM Run 09-008 by county and model layer.

County	Layer 1	Layer 2	Layer 3	Layer 4	Gulf Coast Aquifer Average
Bee	67	79	65	55	66
Brooks	84	157	130	130	131
Cameron	46	63	27	27	41
Duval	146	171	157	131	150
Hidalgo	55	91	57	56	66
Jim Wells	98	115	107	105	107
Jim Hogg		206	207	194	202
Kenedy	32	254	55	54	99
Kleburg	35	280	73	73	115
Live Oak	82	80	71	23	41
McMullen				11	11
Nueces	32	126	38	38	59
San Patricio	34	94	27	27	46
Starr		150	137	102	127
Webb		265		124	197
Willacy	37	178	39	39	73
GMA-16 Average	46	158	77	77	94

The following is the GMA-16 drawdown based upon Scenario 10, GAM Run 09-008 by GCD:

Groundwater Conservation District	Drawdown (ft) in 2060 from Estimated 2010 Conditions					Total Gulf Coast Aquifer Pumping (AF/yr)
	Layer 1	Layer 2	Layer 3	Layer 4	Gulf Coast Aquifer Average	
Bee	59	72	54	49	58	10,653
Brush Country	97	164	151	154	150	68,595
Corpus Christi	12	69	25	25	33	1,794
Duval	146	171	157	131	150	14,055
Kenedy	41	241	62	61	101	94,804
Live Oak	82	80	71	23	41	11,433
McMullen				10	10	510
Red Sands		40	40	40	40	584
San Patricio	34	94	27	27	46	19,000
Starr		150	137	102	127	7,521

The resolution adopting the DFC is included in Appendix F.

As provided under Texas Water Code § 36.108(d), at a minimum, every five years the District must revisit the adoption of its DFCs. The District, through GMA-16, is currently in the process of amending the DFC established August 30, 2010.

Following the GMA-16 submission of the DFC to the TWDB, the TWDB produced GAM Run 10-047 MAG. This GAM Run is the total amount of pumping from the aquifer including uses of water both subject to permitting and exempt from permitting. The pumping output from the groundwater availability model is the estimate of the modeled available groundwater under the Water Code definition. The modeled available groundwater for the District is 68,846 acre-feet per year.

- B. Amount of groundwater being used within the district on an annual basis — 31 TAC 356.5 (a)(5)(B) and Tex. Water Code §36.1071(e)(3)(B).

To estimate the annual groundwater being used in the District, the District relies on the April 16, 2012 TWDB report entitled “Estimated Historical Water Use and 2012 State Water Plan Datasets: Brush Country Groundwater Conservation District” (Datasets). The data for estimated historical groundwater use is represented by the

TWDB to be up-to-date as of April 12, 2012, and is based upon the TWDB Historical Water Use Survey. The most recent values are shown in the table below. For a complete listing of the use survey data, including the most recently available five years, see Appendix G.

County	Municipal AFY	Manufacturing AFY	Irrigation AFY	Mining AFY	Livestock AFY	Total AFY
Brooks	1,434	0	471	0	236	2,141
Hidalgo	117	7	1	2	6	133
Jim Hogg	907	0	562	77	346	1,892
Jim Wells	1,999	0	1,429	115	553	4,096

- C. Annual amount of recharge from precipitation to the groundwater resources within the district — 31 TAC 356.5 (a)(5)(C) and Tex. Water Code § 36.1071(e)(3)(C).

The estimate of the annual amount of recharge from precipitation to the aquifers within the District is based on - water budgets generated from the draft GMA-16 Flow Model (Hutchinson and others, 2011) for the calibration period 1963 to 1999.

The estimated annual amount of recharge from precipitation to the District is - 8,855 acre-feet. Note – the recharge amount is only an estimate which could change in the future based upon further research and information developed by the District. This recharge amount is distributed among the aquifers and the counties as follows:

County	Annual Recharge (AF)
Brooks County	1,966
Hidalgo County	53
Jim Hogg County	4,470
Jim Wells County	2,366
Total	8,855

County	Annual Recharge (AF)
Gulf Coast Aquifer System	8,198
Chicot Aquifer	1,956
Evangeline Aquifer	6,201
Jasper Aquifer	41
Yegua Jackson Aquifer	657
Total	8,855

- D. For each aquifer, the annual net volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers — 31 TAC 356.5 (a)(5)(D) and Tex. Water Code § 36.1071(e)(3)(D).

The estimate of the annual amount of net water discharged to surface water systems by the groundwater resources of the District is 30,920 AF. This volume is based on water budgets generated from the draft GMA-16 Flow Model (Hutchinson and others, 2011) for the calibration period 1963 to 1999. These numbers are positive indicating the net flow is from the streams to aquifer. Note the net surface discharge amount is only an estimate and could change in the future based upon further research and information developed by the District. The 30,940 AFY is distributed among the aquifers and the counties as follows:

County	Annual Net Surface Water/Groundwater Exchange (AF)
Brooks County	3,101
Hidalgo County	8
Jim Hogg County	18,514
Jim Wells County	9,297
Total	30,920

County	Annual Net Surface Water/Groundwater Exchange (AF)
Gulf Coast Aquifer System	17,574
Chicot Aquifer	7,566
Evangeline Aquifer	1,208
Jasper Aquifer	8,800
Yegua Jackson	13,346
Total	30,920

- E. Annual volume of flow into and out of the district within each aquifer and between aquifers in the district, if a groundwater availability model is available — 31 TAC 356.5 (a)(5)(E) and Tex. Water Code §36.1071(e)(3)(E). The annual volume of flow into and out of the district within reach aquifer and between the aquifers is based on water budgets generated from the draft GMA-16 Flow Model

(Hutchinson and others, 2011) for the calibration period 1963 to 1999. These annual volumes are listed in the table below:

Aquifer	Annual Flow Into the District (AF)	Annual Flow Out of the District(AF)	Annual Flow Between Aquifer and Overlying Geologic Unit ¹	Annual Flow Between Aquifer and Underlying Geologic Unit ¹
			(AF)	(AF)
Gulf Coast Aquifer System	25,390	40,833	0	7,955
Chicot Aquifer	5,710	22,178	0	12,623
Evangeline Aquifer	8,392	8,499	-12,623	14,630
Burkeville Confining Unit	9,354	8,418	-14,630	13,819
Jasper Aquifer	1,934	1,738	-13,819	7,955
Yegua -Jackson Aquifer	10,051	12,281	-7,955	0
Total	35,441	53,114	NA	NA

- F. Projected surface water supply in the district, according to the most recently adopted state water plan — 31 TAC 356.5 (a)(5)(F) and Tex. Water Code §36.1071(e)(3)(F).

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates a projected surface water supply for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Projected surface water supply data from the 2012 State Water Plan Data Set is shown below except water use groups within each County that are not within the District were excluded.

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BROOKS COUNTY

WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
Livestock	Nueces-Rio Grande	Livestock Local Supply	484	484	484	484	484	484
Sum of Projected Surface Water Supplies (AFY) =				484	484	484	484	484
			484					

HIDALGO COUNTY

WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
Livestock	Nueces-Rio Grande	Livestock Local Supply	0	0	0	0	0	0
Livestock	Rio Grande	Livestock Local Supply	0	0	0	0	0	0
Sum of Projected Surface Water Supplies (AFY) =				0	0	0	0	0
			0					

JIM HOGG COUNTY

WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
Livestock	Nueces-Rio Grande	Livestock Local Supply	0	0	0	0	0	0
Livestock	Rio Grande	Livestock Local Supply	0	0	0	0	0	0
Sum of Projected Surface Water Supplies (AFY) =				0	0	0	0	0
			0					

JIM WELLS COUNTY

WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
Livestock	Nueces	Livestock Local Supply	152	152	152	152	152	152
Livestock	Nueces-Rio Grande	Livestock Local Supply	743	743	743	743	743	743
Sum of Projected Surface Water Supplies (AFY) =				895	895	895	895	895
			895					

- G. Projected total demand for water in the district according to the most recently adopted state water plan — 31 TAC 356.5 (a)(5)(G) and Tex. Water Code §36.1071(e)(3)(G).

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates a projected total demand for water for each County within the District.

Demand data from the 2012 State Water Plan Data Set is shown below except water use groups within each County that are not within the District were excluded. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by

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JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

BROOKS COUNTY

WUG	WUG Basin	2010	2020	2030	2040	2050	2060
County-Other	Nueces-Rio Grande	130	76	45	27	16	9
Falfurrias	Nueces-Rio Grande	2,135	2,515	2,795	2,957	3,021	3,032
Irrigation	Nueces-Rio Grande	17	17	17	16	15	15
Livestock	Nueces-Rio Grande	538	538	538	538	538	538
Mining	Nueces-Rio Grande	108	116	120	125	129	132
Total Projected Water Demands (AFY) =		2,928	3,262	3,515	3,663	3,719	3,726

HIDALGO COUNTY

WUG	WUG Basin	2010	2020	2030	2040	2050	2060
Livestock	Nueces-Rio Grande	10	10	10	10	10	10
Livestock	Rio Grande	1	1	1	1	1	1
Total Projected Water Demands (AFY) =		11	11	11	11	11	11

JIM HOGG COUNTY

WUG	WUG Basin	2010	2020	2030	2040	2050	2060
County-Other	Nueces-Rio Grande	137	143	147	150	148	142
County-Other	Rio Grande	16	16	17	17	17	16
Hebbronville	Nueces-Rio Grande	731	759	780	792	778	748
Irrigation	Nueces-Rio Grande	817	817	817	817	817	817
Livestock	Nueces-Rio Grande	383	383	383	383	383	383
Livestock	Rio Grande	135	135	135	135	135	135
Mining	Nueces-Rio Grande	33	36	37	38	39	40
Total Projected Water Demands (AFY) =		2,252	2,289	2,316	2,332	2,317	2,281

JIM WELLS COUNTY

WUG	WUG Basin	2010	2020	2030	2040	2050	2060
County-Other	Nueces	292	304	307	304	299	292
County-Other	Nueces-Rio Grande	1695	1761	1784	1764	1735	1698
Irrigation	Nueces	1103	968	850	747	657	577
Irrigation	Nueces-Rio Grande	1960	1721	1512	1329	1168	1027

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Livestock	Nueces	169	169	169	169	169	169
Livestock	Nueces-Rio Grande	825	825	825	825	825	825
Mining	Nueces	187	204	214	224	234	243
Mining	Nueces-Rio Grande	208	227	238	249	262	271
Orange Grove	Nueces-Rio Grande	374	394	405	406	402	393
Premont	Nueces-Rio Grande	858	905	931	935	925	905
San Diego	Nueces-Rio Grande	103	105	106	105	103	101
Total Projected Water Demands (AFY) =		7,781	7,590	7,348	7,273	6,786	6,407

VI. CONSIDER THE WATER SUPPLY NEEDS AND WATER MANAGEMENT STRATEGIES INCLUDED IN THE ADOPTED STATE WATER PLAN — 31 TAC 356.5 (a)(7) and Texas Water Code § 36.1071(e)(4)

A. Water Supply Needs.

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates projected water supply needs for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Data concerning water supply needs from the 2012 State Water Plan Data Set is contained in Appendix H.

B. Water Management Strategies.

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates projected water management strategies for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Projected water management strategies from the TWDB 2012 State Water Plan Data Set is contained in Appendix I.

VII. DETAILS ON THE DISTRICT MANAGEMENT OF GROUNDWATER

The Texas Legislature has established that groundwater conservation districts, such as the Brush Country Groundwater Conservation District, are the state's preferred method of groundwater management. The Texas Legislature codified its groundwater management policy decision in Section 36.0015 of the Texas Water Code, which provides that districts will manage the groundwater resources within their boundaries through rules developed and implemented in accordance with Chapter 36 of the Texas Water Code. Chapter 36 provides directives for districts and the statutory authority to carry out such directives to enable districts to have the necessary tools to protect and preserve the groundwater resources with their boundaries. The District will use the regulatory tools it has been given by Chapter 36 to properly address the groundwater issues within its boundaries, including groundwater supply and groundwater quality. While using its regulatory tools to accomplish the District's statutory objectives, the District will give strong consideration to the economic and cultural activities which occur within the District and which rely upon the continued use of groundwater.

Section 36.1072 of the Water Code requires the District to adopt rules necessary to implement this management plan. The section also prohibits the District from adopting all but a handful of rules until the management plan is approved. Once this management plan is approved, the District will adopt rules, which the public will be able to download on the District's website at www.brushcountrygcd.com.

One of the District's objectives is to lessen the interference between wells. The District plans to establish spacing rules which require new wells to be spaced a certain distance from existing or previously permitted wells. The District will follow the statutory exemption from spacing requirements such as for wells drilled under a permit issued by the Railroad Commission or for production from wells to the extent withdrawals are required for mining activities. Another way the District can work to lessen interference between wells is to require existing and new wells not otherwise exempted from registration, to register with the District. This requirement will allow the District to have information on the location and proximity of all wells within its boundaries.

The District intends to help prevent the contamination of groundwater from abandoned and deteriorated water wells. Wells that have been abandoned or have not been properly maintained can cause surface contamination to quickly reach the groundwater resources of the District. To address this issue, the District is planning to require that all abandoned, deteriorated, or replaced wells be plugged in compliance with the Water Well Drillers and Pump Installers Rules of the Texas Department of Licensing and Regulation. The District will also require capping of water wells that well owners plan to use at a later date. This will likely help to eliminate waste, prevent pollution, and stop future deterioration of well casing.

The District also plans to use the regulatory tools granted to districts by Chapter 36 to preserve and protect existing and historic users of groundwater within its boundaries. The Texas Legislature gives the District the authority to protect existing users of groundwater, which are those individuals or entities currently invested in and using groundwater or the groundwater resources within the District for a beneficial purpose. The Texas Legislature also provides the authority to preserve historic use by historic users, which are those individuals or entities who used groundwater beneficially in the past. Some uncertainty exists in permitting based upon historic use following the Texas Supreme Court decision in the *Edwards Aquifer Authority v. Day and McDaniel*. To the extent permitted under Chapter 36 and the case law following *EAA v. Day*, the District will strive to protect existing and historic use in accordance with Chapter 36, the District's rules, and the goals and objectives of this Management Plan. One of the tools the District can use to protect existing and historic use of groundwater is to establish a permitting process through the District's rules. Pursuant to legislative authority, including Section 36.113(e) of the Texas Water Code, the District will protect existing use by possibly imposing more restrictive permit conditions on new permit applications and increased use by historic users. In protecting existing users, the District may establish limitations that apply to all subsequent new permit applications and increased use by historic users, regardless of type or location of use, which bear a reasonable relationship to this Management Plan and are reasonably necessary to protect existing use. In accordance with Section 36.116(b) of the Texas Water Code, the District may also preserve historic use when developing and implementing rules limiting groundwater production to the maximum extent practicable and consistent with this Management Plan.

The District intends to protect existing and historic users of groundwater by creating a monitoring well network for the District. The monitoring well network will enable the District to determine if new wells should be permitted based on the water levels indicated in various parts of the District's monitoring well network.

In order to better manage the groundwater resources within the District's boundaries, the District may establish management zones and adopt different rules for each subdivision of an aquifer or geologic strata located in whole or in part within the boundaries of the District or each geographic area overlying a subdivision of an aquifer located in whole or in part within the boundaries of the District. As previously stated, the District will also adopt rules to regulate groundwater withdrawals by means of spacing and/or production limits. The factors to be considered in deciding whether to grant or deny a permit or limit groundwater withdrawals should include those factors set forth in the District's Enabling Act, Chapter 36 of the Texas Water Code, and the District's rules.

Finally, the District may develop rules that address production of groundwater by:

- A. setting production limits on wells;
- B. limiting the amount of water produced based on acreage or tract size;

- C. limiting the amount of water that may be produced from a defined number of acres assigned to an authorized well site;
- D. limiting the maximum amount of water that may be produced on the basis of acre-feet per acre or gallons per minute per well site per acre;
- E. managed depletion; or
- F. any combination of the methods listed above in Paragraphs (A) through (E).

VIII. ACTIONS, PROCEDURES, PERFORMANCE AND AVOIDANCE FOR PLAN IMPLEMENTATION — 31 TAC 356.5 (a)(4), 31 TAC 356.6 (a)(3) and Tex. Water Code §36.1071(e)(2)

The District will use its Management Plan to direct the District’s efforts to conserve and protect the groundwater resources within its jurisdiction. The District will make certain that all rules development, regulatory activities, and planning are consistent with this Management Plan.

Section 36.108 of the Texas Water Code requires the District to work and plan with other groundwater conservation districts in GMA-16. The District will use this Management Plan as part of its cooperation efforts with the neighboring groundwater conservation districts.

The rules for the District will be developed in coordination with the management goals and technical information provided in this Management Plan. The District’s rules will be consistent with the provisions of this Management Plan and Chapter 36 of the Texas Water Code. The enforcement of the rules will be driven by the hydrogeological and technical information available to the District, including the information provided in this Management Plan.

The District intends to propose rules covering the following:

Well Registration, Drilling Permits, and Operating Permits

Fees

As authorized by Texas Water Code 36.205, the District will consider whether fees will be charged for activities associated with water wells, such as registration fees, application fees, production fees, or export fees.

Well Construction and Completion Standards

The District will adopt well construction and completion standards, at a minimum requiring that construction of all wells and installation of all pumps located within the District shall be in accordance with the Texas Occupations Code Chapter 1901, “Water Well Drillers” and Chapter 1902, “Water Well Pump Installers.” as amended, and the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas

Administrative Code, Chapter 76, as amended. The District will determine based on the hydrogeology of the area, whether additional standards are required.

Reporting and Recordkeeping

The District will consider various recordkeeping and recording requirements such as submittal of well drilling and completion reports, pump reports, annual water use reports, or other reports that may be helpful to the District in fulfilling its statutory duties.

Plugging, Sealing, and Capping of Wells

The District will adopt at a minimum the requirement that a deteriorated or abandoned well shall be plugged in accordance with Texas Department of Licensing and Regulation, 16 Texas Administrative Code, Chapter 76, as amended. The rules will also address circumstances requiring the sealing and capping of wells.

Well Spacing

The District will adopt at a minimum the spacing requirements of the Water Well Driller's rules, 16 Texas Administrative Code Section 76.1000, as amended. Based on District-specific conditions, the District may decide to impose additional spacing requirements.

Enforcement

The District will adopt rules setting out its enforcement authority and policies, as authorized by Texas Water Code §§ 36.101 and 36.102. The rules will authorize entry onto property as authorized by Texas Water Code § 36.123. The rules will establish the process by which the District will undertake an enforcement action and the steps to be followed.

Procedural Rules

The District will adopt procedural rules establishing required notice and hearing for various District activities such as approval of the management plan and budget; approval of rules, including emergency rules; actions on drilling and operating permits; permit actions requiring a contested case hearing; and enforcement matters.

Prohibition Against Waste

The District will adopt a rule prohibiting waste of groundwater.

Drought Management

The District may adopt rules to address drought conditions.

Exemptions

The District will adopt rules that, at a minimum, exempt from permitting the activities described under Texas Water Code § 36.117.

IX. METHODOLOGY FOR TRACKING PROGRESS TO ACHIEVE THE DISTRICT'S MANAGEMENT GOALS — 31 TAC §356.5 (a)(6)

To track its progress in achieving its management goals and objectives, the District will prepare an annual report (“Annual Report”) to be submitted to and reviewed by its Board of Directors. The Annual Report will be submitted to the Board of Directors no later than 90 days following the end of the District's fiscal year. The Annual Report will address the District's performance regarding each of the management goals and objectives in this plan for the previous fiscal year. Completion of the Annual Report will begin following the end of fiscal year 2012. The District will maintain a copy of the Annual Report for public review in its records after the Annual Report has been adopted by the Board of Directors.

X. DISTRICT GOALS, MANAGEMENT OBJECTIVES AND PERFORMANCE STANDARDS — 31 TAC §356.5

Each of the District's goals, objectives, and performance standards are addressed as follows:

A. Providing the Most Efficient Use of Groundwater - 31 TAC § 356.5 (a)(1)(A) and Tex. Water Code § 36.1071(a)(1)

1. *Objective:* Beginning in 2012, the District will require the registration of wells not otherwise exempt from registration within the District's boundaries each year. Each year the District will locate and register a minimum of one well.

Performance Standard: The number of new and existing wells registered with the District will be provided in the Annual Report for each fiscal year.

2. *Objective:* The District will require permits for all groundwater use considered non-exempt within District boundaries each year. The District will establish a permitting process in the District's rules.

Performance Standard: The District will accept and process permit applications for all non-exempt groundwater use pursuant to the permitting process described in the District Rules each year. The Annual Report for each year will contain a summary of the number of applications submitted to the District requesting authorization for the permitted use of groundwater and the number and type of permits issued by the District.

B. Controlling and Preventing Waste of Groundwater - 31TAC § 356.5 (a)(1)(B) and Tex. Water Code § 36.1071(a)(2)

1. Objective: Each year the District will provide information to the public on reducing and preventing the waste of groundwater. The District will use one of the methods set forth below to provide information to the public at least once during each fiscal year:
 - a. Offer public presentations on groundwater issues, including waste prevention;
 - b. Sponsor an educational program or course;
 - c. Distribute literature packets or brochures;
 - d. Provide information on the District's web site addressing the prevention of waste; or
 - e. Submit newspaper articles to the newspapers of general circulation within the District for publication;

Performance Standard: The Annual Report will include a summary of the District's efforts during the previous year to provide information to the public on the reducing and preventing the waste of groundwater.

2. Objective: The District will prohibit waste as defined by Chapter 36 of the Texas Water Code within its boundaries and will implement this prohibition through its rules.

Performance Standard: The District's Annual Report will include a summary of the number of well owners who violated the District's prohibition on waste and any action taken by the District.

C. Controlling and Preventing Subsidence – 31 TAC § 356.5 (a)(1)(C) and Tex. Water Code §36.1071(a)(3)

1. Objective: The District will monitor for any signs of subsidence within its boundaries.

Performance Standard: The District will indicate in its Annual Report that it has monitored for any signs of subsidence and, if evidence of subsidence is found, shall provide an explanation in its Annual Report.

2. Objective: The District will stay abreast of subsidence issues within the GMA-16 area.

Performance Standard: The District will indicate in its Annual Report that it has stayed abreast of subsidence issues within the GMA-16 area and will provide a list of those groundwater conservation districts or other entities that have experienced any new evidence of subsidence within the previous year.

D. Addressing Conjunctive Surface Water Management Issues – 31 TAC §356.5 (a)(1)(D) and Tex. Water Code §36.1071(a)(4)

1. Objective: The District will participate in the regional water planning process by sending a District representative to attend at least one meeting of the Rio Grande Regional Water Planning Group (“Region M”) and one meeting of the Coastal Bend Regional Water Planning Group (“Region N”) each year. The District will coordinate with the Nueces River Authority, a member of Region N, during attendance of the Region N Meeting.

Performance Standard: Attendance at the Region M meeting and the Region N meeting by a representative of the District will be included in the Annual Report and will provide the dates of attendance.

E. Addressing Natural Resource Issues which Impact the Use and Availability of Groundwater, and which are Impacted by the Use of Groundwater - 31TAC §356.5 (a)(1)(E); and Tex. Water Code §36.1071(a)(5)

1. Objective: Beginning in 2012, the District will monitor water-levels within District boundaries on an annual basis by measuring the water level of at least 3 wells within the District’s boundaries.

Performance Standard: Beginning in 2012, the District's Annual Report will include a description of the number of wells measured and the monitoring results of each well measured.

2. Objective: The District will monitor whether there are any significant impacts to wildlife common to the District that rely on the District’s groundwater resources.

Performance Standard: The District’s Annual Report will indicate that the District monitored any impacts to wildlife and, if any significant impacts are found, will describe such impacts in its Annual Report.

F. Addressing Drought Conditions - 31TAC §356.5 (a)(1)(F) and Tex. Water Code §36.1071(a)(6)

1. Objective: The District will access at least one updated Palmer Drought Severity Index ("PDSI") map each quarter and will check for updates to the Drought Preparedness Council Situation Report ("Situation Report") posted on the following website: <http://www.txdps.state.tx.us/dem/sitrepindex.htm>. The District also will access useful drought information on the TWDB website: <http://www.twdb.state.tx.us/data/drought>.

Performance Standard: The District will include the PDSI maps and Situation Reports it has reviewed in its Annual Report each year and will include a discussion of the current drought status of the District.

G. Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, or Brush Control, where Appropriate and Cost Effective - 31TAC §356.5 (a)(1)(G) and TWC §36.1071(a)(7).

1. Objective: The District will provide information to the public on water conservation at least once each fiscal year by one of the following methods:
 - a. Distribute literature packets or brochures within the District;
 - b. Provide information to the public on the District's web site;
 - c. Conduct public presentations;
 - d. Submit newspaper articles to newspapers of general circulation in the District for publication; or
 - e. Present exhibits at local public events;

Performance Standard: The District's Annual Report will provide a description of the District efforts and a copy of any information provided to the public during the previous year to promote conservation.

2. Objective: The District will provide information to the public by providing literature at the District's office, once the District establishes an office.

Performance Standard: The District's Annual Report will include a copy of the information provided to the public at the District's office.

3. Objective: The District will promote rainwater harvesting by providing information on rainwater harvesting on the District's web site at least once each year, once a website is established for the District.

Performance Standard: The District's Annual Report will include a copy of the information on rainwater harvesting which has been provided on the District web site within the previous fiscal year.

4. Objective: The District will inform the public about the brush control activities within the District's boundaries and the benefits of brush control by providing literature at the District's office, once the District establishes an office.

Performance Standard: The District's Annual Report will include an update on the brush control activities within the District's boundaries and will provide a copy of the literature provided to the public at the District's office.

5. Precipitation enhancement is not an appropriate goal for the District at this time since there is not an operational precipitation enhancement program in the area or in other groundwater conservation districts in the vicinity of the District. The District recognizes the significant expense associated with precipitation enhancement programs and is currently unable to develop a precipitation enhancement program for this reason.

6. Objective: The District will begin to identify recharge areas within the District.

Performance Standard: Any recharge areas identified during the year will be discussed in the District's Annual Report.

- H. Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources - 31TAC §356.5(a)(1)(H) and Tex. Water Code § 36.1071(a)(8).

1. Objective: Each year, the District will collect at least ten water level measurements from District monitor wells. The ten water level measurements will be taken from 3 wells in Brooks County, 3 wells in Jim Hogg County, 3 wells in Jim Wells County, and 1 well in Hidalgo County.

Performance Standard: Each year the District will post the water level measurement collected and identify the aquifer from which the

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measurement is taken in the District's Annual Report and website. The District will include a discussion of the change in water level in each aquifer as compared to previous years' water level.

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APPENDIX LIST

- Appendix A Brush Country Groundwater Conservation District Enabling Act
- Appendix B Map of Brush Country Groundwater Conservation District
- Appendix C Notices of Public Hearings and Meetings of Brush Country Groundwater Conservation District
- Appendix D Resolution of Brush Country Groundwater Conservation District Adopting Groundwater Management Plan
- Appendix E Sample Letter and Entities Notified to Evidence Coordination with Surface Water Management Entities
- Appendix F Resolution Adopting DFC
- Appendix G Estimated Historical Water Use
- Appendix H Projected Water Supply Needs
- Appendix I Projected Water Management Strategies

APPENDIX A

SPECIAL DISTRICT LOCAL LAWS CODE

TITLE 6. WATER AND WASTEWATER

SUBTITLE H. DISTRICTS GOVERNING GROUNDWATER

For contingent expiration of this chapter, see Section 8852.003.

CHAPTER 8852. BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8852.001. DEFINITIONS. In this chapter:

- (1) “Board” means the board of directors of the district.
- (2) “Director” means a member of the board.
- (3) “District” means the Brush Country Groundwater Conservation District.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.002. NATURE OF DISTRICT. The district is a groundwater conservation district created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.003. CONFIRMATION ELECTION REQUIRED. If the creation of the district is not confirmed in at least one of the territories described by Section 8852.023 at a confirmation election held before September 1, 2011:

- (1) the district is dissolved on September 1, 2011, except that:
 - (A) any debts incurred shall be paid;

- (B) any assets that remain after the payment of debts shall be transferred in equal amounts to Jim Hogg, Brooks, Hidalgo, and Jim Wells Counties; and
 - (C) the organization of the district shall be maintained until all debts are paid and remaining assets are transferred; and
- (2) this chapter expires September 1, 2013.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.004. INITIAL DISTRICT TERRITORY.

- (a) The district is initially composed of the territory described by Section 2 of the Act creating this chapter.
- (b) The boundaries described in Section 2 of the Act creating this chapter form a closure. A mistake made in describing the district's boundaries in the legislative process does not affect the district's:
 - (1) organization, existence, or validity;
 - (2) right to issue any type of bond for the purposes for which the district is created or to pay the principal of and interest on a bond;
 - (3) right to impose an assessment or tax; or
 - (4) legality or operation.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.005. CONSTRUCTION OF CHAPTER. This chapter shall be liberally construed to achieve the legislative intent and purposes of Chapter 36, Water Code. A power granted by Chapter 36, Water Code, or this chapter shall be broadly interpreted to achieve that intent and those purposes.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER B. DISTRICT CREATION

Sec. 8852.021. TEMPORARY DIRECTORS.

- (a) The temporary board consists of:
 - (1) David Grall;
 - (2) Mauro Garcia;
 - (3) Robert Scott;
 - (4) A. C. Jones IV;
 - (5) Mario Martinez;
 - (6) Israel Hinojosa;
 - (7) a person appointed by the commissioners courts of Brooks and Jim Hogg Counties within 60 days of the effective date of this Act;
 - (8) Jesse Howell;
 - (9) Pearson Knolle; and
 - (10) Lawrence Cornelius.
- (b) If there is a vacancy on the temporary board, the remaining temporary directors shall select a qualified person to fill the vacancy.
- (c) Unless the temporary director's term expires under Subsection (d), a temporary director serves until the earlier of:
 - (1) the date the temporary director becomes an initial permanent director under Section 8852.024; or
 - (2) the date this chapter expires under Section 8852.003.
- (d) The following temporary directors' terms expire on the date of the canvass of the election to confirm the creation of the district:
 - (1) David Grall and Mauro Garcia, if the voters in the territory described by Section 8852.023(a)(3) vote not to confirm the creation of the district;
 - (2) Robert Scott, if the voters in the territory described by Section 8852.023(a)(1) vote not to confirm the creation of the district;
 - (3) A. C. Jones IV and Mario Martinez, if the voters in the territory described by Section 8852.023(a)(5) vote not to confirm the creation of the district;

- (4) Israel Hinojosa, if the voters in the territory described by Section 8852.023(a)(4) vote not to confirm the creation of the district;
- (5) a person appointed by the commissioners courts of Brooks and Jim Hogg Counties, if the creation of the district is confirmed by voters of none of the territories described by Section 8852.023;
- (6) Jesse Howell and Pearson Knolle, if the voters in the territory described by Section 8852.023(a)(6) vote not to confirm the creation of the district; and
- (7) Lawrence Cornelius, if the voters in the territory described by Section 8852.023(a)(2) vote not to confirm the creation of the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.022. ORGANIZATIONAL MEETING OF TEMPORARY DIRECTORS. As soon as practicable after all the temporary directors have qualified under Section 36.055, Water Code, a majority of the temporary directors shall convene the organizational meeting of the district at a location within the district agreeable to a majority of the directors. If an agreement on location cannot be reached, the organizational meeting shall be at the Brooks County Courthouse.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.023. CONFIRMATION ELECTION.

- (a) The temporary board shall hold an election in each of the following territories in the district to confirm the creation of the district and the imposition of a maintenance tax:
 - (1) the territory in the corporate limits of the city of Falfurrias as of January 1, 2009;
 - (2) the territory in the corporate limits of the city of Alice as of January 1, 2009;

- (3) the territory:
 - (A) in Brooks County that, as of January 1, 2009, is:
 - (i) outside the corporate limits of the city of Falfurrias; and
 - (ii) not in the Kenedy County Groundwater Conservation District; and
 - (B) in Hidalgo County that is:
 - (i) described by a metes and bounds description in Section 2 of the Act creating this chapter; and
 - (ii) not in the Kenedy County Groundwater Conservation District as of January 1, 2009;
 - (4) the territory in the certificated retail water service area of the Jim Hogg County Water Control and Improvement District No. 2 as of January 1, 2009;
 - (5) the territory in Jim Hogg County that is outside the certificated retail water service area of the Jim Hogg County Water Control and Improvement District No. 2 as of January 1, 2009; and
 - (6) the territory in Jim Wells County that, as of January 1, 2009, is:
 - (A) outside the corporate limits of the city of Alice; and
 - (B) not in the Kenedy County Groundwater Conservation District.
- (b) Section 41.001(a), Election Code, does not apply to a confirmation election held as provided by this section.
 - (c) Except as provided by this section, an election under this section must be conducted as provided by Sections 36.017(b), (c), and (e), Water Code, and the Election Code.
 - (d) The ballot for the election must be printed to provide for voting for or against the proposition: "The creation of the Brush Country Groundwater Conservation District and the levy of an ad valorem tax in the district at a rate not to exceed three cents for each \$100 of assessed valuation."
 - (e) If the majority of voters in a territory described by Subsection (a) voting at an election held under this section vote to confirm the creation of the district, that

territory is included in the district. If the majority of voters in a territory described by Subsection (a) voting at an election held under this section vote not to confirm the creation of the district, that territory is excluded from the district.

- (f) If the majority of voters in any of the territories described by Subsection (a) voting at an election held under this section vote not to confirm the creation of the district, the temporary board or any successor board may hold a subsequent confirmation election in that territory.
- (g) The district may not impose a maintenance tax unless the tax is confirmed under this section.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.024. INITIAL PERMANENT DIRECTORS.

- (a) If the creation of the district is confirmed at an election held under Section 8852.023 in one or more territories in the district, each temporary director who represents a territory that is included in the district becomes an initial permanent director of the district.
- (b) The initial permanent directors shall draw lots to determine which directors serve a term expiring on June 1 of the first even-numbered year after the confirmation election and which directors serve a term expiring on June 1 of the next even-numbered year.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.025. GIFTS AND GRANTS. The temporary board may solicit and accept gifts and grants, including services, on the district's behalf from any public or private source to provide revenue for the district before a confirmation election is held under Section 8852.023.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.026. RIGHT OF CERTAIN LANDOWNERS TO WITHDRAW FROM DISTRICT. A person who owns a tract of land in Brooks or Hidalgo County that adjoins the

boundaries of the Kenedy County Groundwater Conservation District as of the effective date of the Act creating this chapter may petition the Kenedy County Groundwater Conservation District for annexation into that district. Notwithstanding any other law, the Kenedy County Groundwater Conservation District may annex territory described by a petition under this section. Territory annexed by the Kenedy County Groundwater Conservation District under this section not later than January 1, 2010, is disannexed at that time from the district created by this chapter.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.027. LIMITATION OF POWERS OF TEMPORARY BOARD.

- (a) The temporary board may exercise only the powers described by Sections 8852.022, 8852.023, and 8852.025.
- (b) Except as required by a law or rule relating to participation in a groundwater management area in which the district is located, the temporary board may not:
 - (1) adopt rules, including rules regarding wells; or
 - (2) develop a draft or final management plan.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER C. BOARD OF DIRECTORS

Sec. 8852.051. APPOINTMENT OF DIRECTORS; TERMS.

- (a) Not later than June 1 of each even-numbered year, the Commissioners Courts of Brooks County, Jim Hogg County, and Jim Wells County shall appoint directors as follows:
 - (1) the Commissioners Court of Brooks County shall appoint:
 - (A) one director who represents the municipal interests of the territory described by Section 8852.023(a)(1), if the territory described by Section 8852.023(a)(1) is included in the district; and
 - (B) two directors who represent the agricultural interests of the

- territory described by Sections 8852.023(a)(3)(A) and (B), if the territory described by Sections 8852.023(a)(3)(A) and (B) is included in the district;
- (2) the Commissioners Court of Jim Hogg County shall appoint:
 - (A) one director who represents the interests of Jim Hogg County in the territory described by Section 8852.023(a)(4), if the territory described by Section 8852.023(a)(4) is included in the district; and
 - (B) two directors who represent the agricultural interests of the territory described by Section 8852.023(a)(5), if the territory described by Section 8852.023(a)(5) is included in the district;
 - (3) the Commissioners Court of Jim Wells County shall appoint:
 - (A) one director who represents the municipal interests of the territory described by Section 8852.023(a)(2), if the territory described by Section 8852.023(a)(2) is included in the district; and
 - (B) two directors who represent the agricultural interests of the territory described by Section 8852.023(a)(6), if the territory described by Section 8852.023(a)(6) is included in the district; and
 - (4) the Commissioners Courts of Brooks County and Jim Hogg County jointly shall appoint one director to represent the industrial and mining interests of Jim Hogg and Brooks Counties.
- (b) Directors serve staggered four-year terms that expire on June 1 of an even-numbered year.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.052. ELIGIBILITY.

- (a) A director is not disqualified from service because the director is an employee, manager, director of the board, or officer of a groundwater producer that is or may

be regulated by the district.

- (b) A temporary director whose term of office expires under Section 8852.021(d) is not eligible for appointment as a director.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.053. COMPENSATION; REIMBURSEMENT.

- (a) Notwithstanding Section 36.060, Water Code, a director is not entitled to receive compensation for performing the duties of a director.
- (b) A director is entitled to receive reimbursement for the director's reasonable expenses incurred while engaging in activities on behalf of the district in accordance with Sections 36.060(b) and (c), Water Code.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.054. VACANCY. A vacancy in the office of director shall be filled by appointment of the board in a manner consistent with the representational requirements of Section 8852.051. The appointed director serves only for the remainder of the unexpired term to which the director was appointed.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER D. POWERS AND DUTIES

Sec. 8852.101. GROUNDWATER CONSERVATION DISTRICT POWERS AND DUTIES. Except as otherwise provided by this chapter, the district has the powers and duties provided by the general law of this state, including Chapter 36, Water Code, and Section 59, Article XVI, Texas Constitution, applicable to groundwater conservation districts.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.102. CONTRACTS. The district may enter into a contract with any person,

public or private, for any purpose authorized by law.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.103. EXEMPTIONS FROM PERMIT REQUIREMENTS.

- (a) Section 36.117, Water Code, applies to the district except that for the purposes of applying that section to the district, "domestic use" and "livestock use" have the meanings assigned by Subsection (b).
- (b) In this section:
 - (1) "Domestic use":
 - (A) means the use of groundwater by an individual or a household to support domestic activities, including the use of groundwater for:
 - (i) drinking, washing, or culinary purposes;
 - (ii) irrigating a lawn or a family garden or orchard;
 - (iii) watering domestic animals; or
 - (iv) water recreation, including aquatic and wildlife enjoyment; and
 - (B) does not include the use of water:
 - (i) to support an activity for which consideration is given or received or for which the product of the activity is sold; or
 - (ii) by or for a public water system.
 - (2) "Livestock use" means the use of groundwater for the open-range watering of livestock, exotic livestock, game animals, or fur-bearing animals. For purposes of this subdivision, "livestock" and "exotic livestock" have the meanings assigned by Sections 1.003 and 142.001, Agriculture Code, respectively, and "game animal" and "fur-bearing animal" have the meanings assigned by Sections 63.001 and 71.001, Parks and Wildlife Code, respectively. Livestock use does not include use by or for a public water system.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.104. EFFECTS OF TRANSFER.

- (a) In reviewing a proposed transfer of groundwater out of the district in accordance with Section 36.122(f), Water Code, the district shall determine whether the proposed transfer would have a negative effect on:
 - (1) the availability of water in the district;
 - (2) the conditions of any aquifer that overlies the district;
 - (3) subsidence in the district;
 - (4) existing permit holders or other groundwater users in the district;
and
 - (5) any applicable approved regional water plan or certified district management plan.
- (b) If the district determines under Subsection (a) that the transfer would have a negative effect, the district may, in addition to the conditions authorized by Section 36.122, Water Code, impose other requirements or limitations on the permit that are designed to minimize the effect.
- (c) Sections 36.122(c), (i), and (j), Water Code, do not apply to a requirement or limitation imposed under this section.
- (d) The district may impose a fee or surcharge as an export fee. The restrictions under Section 36.122(e), Water Code, do not apply to a fee or surcharge imposed under this subsection.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.105. APPLICABILITY OF DISTRICT REGULATIONS. Groundwater regulations adopted by the district under this chapter apply to all persons except as exempted under Section 36.117, Water Code, or this chapter.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

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Sec. 8852.106. NO EMINENT DOMAIN POWER. The district may not exercise the power of eminent domain.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.107. LANDOWNERS' RIGHTS. The rights of landowners and their lessees and assigns in groundwater in the district are recognized. Nothing in this chapter shall be construed to deprive or divest the owners or their lessees and assigns of their rights, subject to district rules.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.108. LIMITATION ON RULEMAKING POWER NOT APPLICABLE. Section 36.121, Water Code, does not apply to the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER E. GENERAL FINANCIAL PROVISIONS

Sec. 8852.151. REVENUE. To pay the maintenance and operating costs of the district and to pay any bonds or notes issued by the district, the district may impose ad valorem taxes at a rate not to exceed three cents on each \$100 of assessed valuation of taxable property in the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.152. GRANTS, GIFTS, AND DONATIONS. The district may solicit and accept grants, gifts, and donations from any public or private source.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER F. DISSOLUTION

Sec. 8852.201. SUBCHAPTER CUMULATIVE. The provisions of this subchapter are cumulative of the provisions of Subchapter I, Chapter 36, Water Code.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.202. DISSOLUTION BY ELECTION.

- (a) After January 1, 2016, the board shall order an election on the question of dissolving the district if the board receives a petition requesting that an election be held for that purpose that is signed by at least 15 percent of the district's registered voters.
- (b) Not later than the 30th day after the date the board receives the petition, the directors shall:
 - (1) validate the signatures on the petition; and
 - (2) if the signatures are validated, order an election on the next uniform election date under Section 41.001, Election Code.
- (c) The order calling the election must state the nature of the election, including the proposition that is to appear on the ballot.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.203. NOTICE OF ELECTION. Notice of an election under this subchapter must be provided by posting a copy of the order calling the election in at least one conspicuous place for at least 10 days before the day of the election at the county courthouse in Brooks County, Jim Hogg County, Jim Wells County, and Hidalgo County.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.204. BALLOT. The ballot for an election under this subchapter must be printed to permit voting for or against the proposition: "The dissolution of the Brush Country

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Groundwater Conservation District."

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

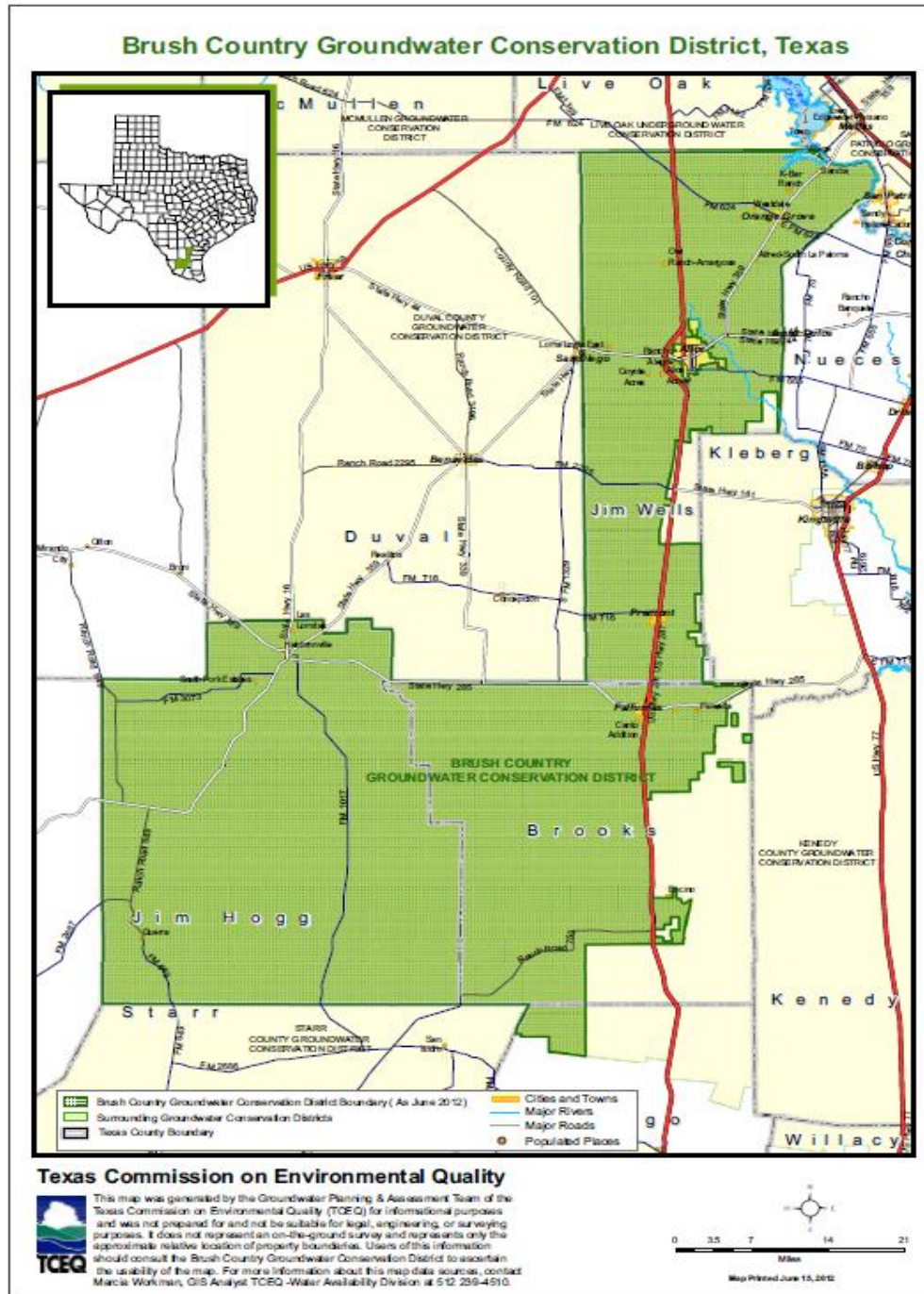
Sec. 8852.205. ELECTION RESULTS; DISPOSITION OF ASSETS. If a majority of the votes in an election under this subchapter favor dissolution:

- (1) the board shall find that the district is dissolved; and
- (2) Section 36.310, Water Code, applies for the purpose of disposition of the district's assets.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

APPENDIX B

MAP OF BRUSH COUNTRY GCD



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APPENDIX C

NOTICES OF PUBLIC HEARINGS AND MEETINGS OF BRUSH COUNTRY GCD

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APPENDIX D
RESOLUTION ADOPTING MANAGEMENT PLAN

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APPENDIX E

**SAMPLE LETTER AND ENTITIES NOTIFIED AND EVIDENCE OF
COORDINATION WITH SURFACE WATER MANAGEMENT ENTITIES**

**Brush Country Groundwater Conservation District
PO Box 136
Falfurrias, TX 78355
(361) 325-5093**

May 31, 2012

To: The Attached Mailing List

Re: Brush Country Groundwater Conservation District's Draft Management Plan

The Brush Country Groundwater Conservation District ("District") Board of Directors approved a draft Management Plan on May 22, 2012. The draft has been submitted to the Texas Water Development Board ("TWDB") for review and comment.

The TWDB has thirty (30) days to review the draft and provide comments. Based upon those comments, the Plan will either undergo further revisions or will be noticed for a public hearing in present form.

The District requests your input on the enclosed draft. Please provide any comments to me within thirty (30) days of receipt of this letter.

Please contact me if you require additional information.

Sincerely,



Felix Saenz
General Manager

Enclosure

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July 24, 2012

Brush Country Groundwater Conservation District
PO Box 136
Falfurrias, TX 78355
(361) 325-5093

May 31, 2012

Mr. Stephen Allen, P.G.
Groundwater Technical Assistance Section
Groundwater Resources Division
Texas Water Development Board
PO Box 13231
Austin, TX 78711

Re: Pre-review of Brush Country Groundwater Conservation District's Management Plan

Dear Mr. Allen:

The Brush Country Groundwater Conservation District ("District") Board of Directors approved a draft Management Plan on May 22, 2012.

The District requests your preliminary review and comment on the draft Management Plan prior to its adoption. The District would appreciate your comments within thirty (30) days of receipt of this letter.

Thank you for your assistance and please contact me if you require further information.

Sincerely,



Felix Saenz
General Manager

Enclosure

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July 24, 2012

Mr. Lonnie Stewart, General Manager
Bee Groundwater Conservation District
PO Box 682
Beeville, TX 78104-0682

Mr. Gustavo Gonzales, Water Director
Corpus Christi ASR Conservation District
PO Box 9277
Corpus Christi, TX 78469

Mr. Alberto Garcia, Manager
Duval County Groundwater Conservation District
PO Box 506
Benavides, TX 78341

Mr. Andy Garza, District Manager
Kenedy County Groundwater Conservation District
PO Box 1433
Kingsville, TX 78363

Mr. Lonnie Stewart, Manager
Live Oak Underground Water Conservation District
3460A Highway 281
George West, TX 78022

Mr. Lonnie Stewart, Manager
McMullen Groundwater Conservation District
PO Box 232
Tilden, TX 78072

Mr. Armando Vela, President
Red Sands Groundwater Conservation District
PO Box 229
Linn, TX 78563

Mr. Duane Campion
San Patricio County Groundwater Conservation District
PO Box 1400
Sinton, TX 78387

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Ms. Rose Benavidez, Manager
Starr County Groundwater Conservation District
601 E. Main St.
Rio Grande City, TX 78582

Con Mims
Nueces River Authority
PO Box 349
Uvalde, TX 78802-0349

Mr. Billy Moss, Manager
Jim Hogg County Water Control and Improvement District No. 2
PO Box 148
Hebbronville, TX 78361-0148

Ms. Melida K. Rangel, Manager
Jim Wells County Freshwater Supply District No. 1
PO Box 428
Ben Bolt, TX 78342-0000

Mr. Gustavo Gonzales, Water Director
City of Corpus Christi Water Development
2726 Holly Road
Corpus Christi, TX 78415

Mayor Carl Srp
City of Orange Grove
PO Box 1350
Orange Grove, TX 78372

Mayor Dalia Gee
City of Premont
PO Drawer 340
Premont, TX 78375

Mayor Ana Maria Garcia
City of Falfurrias
PO Drawer E
Falfurrias, TX 78355

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Mr. Matias Saenz, General Manager
Falfurrias Utility Board
PO Box 518
Falfurrias, TX 78355

Mayor Ruperto Canales III
City of San Diego
404 S. Mier
San Diego, TX 78384

Mr. Vic Casas, General Manager
San Diego Municipal Utility District
200 South Drive EE Dunlap Highway
San Diego, TX 78384

Mr. Rey De Lo Santos, Jr., City Manager
City of Alice
PO Box 3229
Alice, TX 78333

Mr. Glenn Jarvis
Region M Water Planning Group
Law Offices of Glenn Jarvis
1801 S. 2nd Street, Suite 550
McAllen, TX 78503

Carola Serrato
Region N Water Planning Group
South Texas Water Authority
PO Box 1701
Kingsville, TX 78364

Mr. Scott Bledsoe, III
Region N Water Planning Group
Live Oak UWCD
PO Box 3
Oakville, TX 78060

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Judge Ramon Garcia
Hidalgo County Judge
1615 S. Closner
Suite J
Edinburg, TX 78539

Judge Raul M. Ramirez
Brooks County Judge
129 East Rice Street
Falfurrias, TX 78355

Judge Guadalupe S. Canales
Jim Hogg County Judge
PO Box 729t
Hebbronville, TX 78361-0719

Judge L. Arnaldo Saenz
Jim Wells County Judge
200 N. Almond Street
Alice, TX 78332

Mr. David Escobar, Chairman
Loma Blanca Soil and Water Conservation District
PO Box 327
Falfurrias, TX 78355

Ms. Nelda Garcia, Chairman
Jim Wells County Soil and Water Conservation District
2287 North Texas Blvd., Suite 3
Alice, TX 78332

Mr. William C Barefield, Chairman
Monte Mucho Soil and Water Conservation District
1700 North Smith, Suite B
Hebbronville, TX 78361

Mr. Larry Skloss, Chairman
Hidalgo Soil and Water Conservation District
2514 South Veterans Blvd., Suite 2
Edinburg, TX 78539

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Mr. Guillermo Benavides Z, Chairman
Webb Soil and Water Conservation District
7209 East Saunders, Suite 7
Laredo, TX 78043

Mr. Jose Leandro Martinez
Agua Poquita Soil and Water Conservation District
PO Box 477
Benavides, TX 78341

Mr. John Prukop, Chairman
Kleberg-Kenedy Soil and Water Conservation District
401 East King St., Suite 100
Kingsville, TX 78363

Mr. Steve Burns
McGill Ranch
PO Box 3309
Alice, TX 78332

Mr. Eduardo Hinojosa
4122 Kevin
Corpus Christi, TX 78413

L.A. Carter
La Rucia Ranch
309 Cape May Drive
Corpus Christi, TX 78412

Eshleman Vogt Ranch
800 North Shoreline, South Tower
Suite 650
Corpus Christi, TX 78401

Mr. John Prukop
PO Box 932
Premont, TX 78375

Mr. Frank Armstrong
802 North Carancahua
Suite 650
Corpus Christi, TX 78470

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July 24, 2012

Mr. Chris Huff
Robert C. East Wildlife Foundation
PO Box 146
Hebbronville, TX 78361

Lavoyer J. Durham
El Tule Ranch
PO Box 5502
Falfurrias, TX 78355

Mr. Presnell Cage
Cage Ranch
PO Box 540
Falfurrias, TX 78355

Ms. Suzan Durham
PO Box 5502
Falfurrias, TX 78355

Mr. W.P. Wright, Jr.
142 CR 233
Falfurrias, TX 78355

Mr. Trey Bingham
Farm Bureau
PO Box 1936
Alice, TX 78333

Ms. Katherine Hopper
Dos Haches Ranch
PO Box 617
Falfurrias, TX 78355

Ms. Novia C. Hopper
Tepeguaje Ranch
PO Box 146
Encino, TX 78353

Mr. Hector Lopez
PO Box 362
Alice, TX 78355

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July 24, 2012

Mr. Craig Shook
Driscoll Foundation
614 North Upper Broadway, #1635
Corpus Christi, TX 78401

Mr. Edward H. Austin, Jr.
Las Vivoritas Ranch
PO Box 171068
San Antonio, TX 78217

Mr. Henry Hamman
Gato Monte Ranch
3270 West Main
Houston, TX 77098

Mr. T. Dan Friedkin
Friedkin Companies, Inc.
7701 Wilshire Place Drive, Suite 504
Houston, TX 77040-5346

Mr. Ford Smith, Sr.
Puesta del Sol
Triple S Petroleum
PO Box 6156
Austin, TX 78762

Mr. Wallace S. Wilson
Rancho Isabela
3374 Chevy Chase
Houston, TX 77019

Mr. Gus Canales
A. T. Canales Ranches
P. O. Box 650
Premont, TX 78375

Mr. Alford C. Glassel, Jr.
Glassel Producing Company
1021 Main Street, Suite 2300
Houston, TX 77002-6696

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Mr. Garland Lasater
La Barronena Ranch
1301 Humble Court
Fort Worth, TX 78107

Mr. Walter Negley
El Tule Ranch
1519 Fulton Street
Houston, TX 77009

Stormy Stone
La India Ranch
24290 FM 490
Ramondville, TX 78750

Mr. Chuck Weil
Palagana Ranch
500 N Shoreline Blvd., Suite 1118
Corpus Christi, TX 78401

Mr. Jim Gibbs
10000 Memorial Dr., #600
Houston, TX 77024

Balous Miller
Miller Ranch
430 Santa Rosa
San Antonio, TX 78207

Mr. Bryan Wagner
Wagner Oil Company
500 Commerce Street, Suite 600
Fort Worth, TX 76102

Stephen Burns, Jr.
McGill Ranch Ltd.
3684 FM 355
Encino, TX 78353

Mr. Dexter Peacock
600 Travis, Suite 4200
Houston, TX 77002

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July 24, 2012

Robert East Foundation
Paul Price
700 Everhart Rd., Suite G21
Corpus Christi, TX 78411

Nicolo Guerra, Brooks County
mnguerra@ag.tamu.edu

Rogelio Mercado, Jim Wells County
tx-MERCADO@tamu.edu

Bert Martinez, Jim Hogg County
bmartinez@ag.tamu.edu

Brad Cowan, Hidalgo County
b-cowan@tamu.edu

Randy Fugate, Brooks County
randy.fugate@brooks-county.com

Eric Garza, Jim Hogg County
eric.garza@tpwd.state.tx.us

Dustin Windsor, Jim Wells County
dustin.windsor@tpwd.state.tx.us

APPENDIX F

RESOLUTION R2010-001 TO ADOPT DESIRED FUTURE CONDITIONS FOR AQUIFER(S) IN GROUNDWATER MANAGEMENT AREA 16

THE STATE OF TEXAS

GROUNDWATER MANAGEMENT AREA 16

GROUNDWATER CONSERVATION DISTRICTS

WHEREAS, Texas Water Code 36.108 requires the groundwater conservation districts located in whole or in part in a groundwater management area ("GMA") designated by the Texas Water Development Board to adopt desired future conditions for the relevant aquifers located within the management area;

WHEREAS, the groundwater conservation districts located wholly or partially within Groundwater Management Area 16 ("GMA 16"), as designated by the Texas Water Development Board, as of the date of this resolution are as follows: Bee GCD, Brush County GCD, Live Oak UWCD, McMullen GCD, Kenedy County GCD, Corpus Christi Aquifer Storage and Recovery Conservation District, San Patricio County GCD, Starr County GCD, Duval County GCD, and Red Sands GCD (collectively hereinafter "the GMA 16 Districts");

WHEREAS, the GMA 16 Districts are each governmental agencies and bodies politic operating under Chapter 36, Water Code;

WHEREAS, the GMA 16 Districts desire to fulfill the requirements of Texas Water Code 36.108 through mutual cooperation and joint planning efforts;

WHEREAS, the GMA 16 Districts have held numerous public meetings at which they have engaged in joint planning efforts to promote more comprehensive management of the aquifers located in whole or in part in Groundwater Management Area 16;

WHEREAS, the GMA 16 Districts recognize that GMA 16 includes a geographically and hydrologically diverse area with a variety of land uses and a diverse mix of water users;

WHEREAS, the GMA 16 Districts have considered the relevant aquifers, subdivisions thereof, and geologic strata located in whole or in part within the boundaries of GMA 16, and have further considered the hydrogeologic characteristics of the same, as well as the various uses and users of groundwater produced from such aquifers, subdivisions, and strata;

WHEREAS, the GMA 16 Districts held a meeting, which was open to the public and public comment was received, on August 30, 2010 at 1:00 PM in the Blue Room of Sam Fore Hall at Texas A&M University- Kingsville located at 700 University Blvd., Kingsville, TX 78363;

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WHEREAS, notice of said August 30, 2010, meeting was properly given by each and all of the GMA 16 Districts in accordance with Chapter 36, Water Code, and Chapter 551, Government Code, and a true and correct copy of each of the notices has been attached hereto in Appendix A and is incorporated herein for all purposes;

WHEREAS, it is the intent and purpose of the GMA 16 Districts by adoption of this resolution to fulfill the requirements of Texas Water Code 36.108, including establishing "desired future conditions for the relevant aquifers" within GMA 16 for the specific aquifer(s) and desired future conditions described below;

WHEREAS, Texas Water Code 36.108 requires adoption of desired future conditions for only the "relevant aquifers" located within the management area and because the Carrizo-Wilcox, and the Yegua-Jackson aquifer slivers are not used for non-exempt wells and are not anticipated to be used for non-exempt wells during the planning horizon, GMA 16 considers the aquifers to not be relevant for purposes of GMA 16 joint planning at this time;

WHEREAS, GMA 16 Districts agree to continue to work on the desired future conditions for the aquifer(s) set forth below and the Groundwater Availability Model ("GAM") created by the Texas Water Development Board for GMA 16 in the near future after the adoption of the desired future conditions for the aquifer(s) below and the September 1, 2010 statutory deadline;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth below, the GMA 16 Districts have considered all of the criteria required by Chapter 36 of the Texas Water Code and other information including groundwater availability model runs prepared by the TWDB;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth below, the GMA 16 Districts have considered the uses and conditions of the aquifer(s) in different geographic areas within GMA 16 and what the effects and impacts of adopting such desired future conditions will have upon the condition of the aquifer(s) and the uses and users of groundwater from the aquifer(s) both now and in the future;

WHEREAS, after considering such anticipated effects and impacts these desired future conditions will have on the aquifer(s), uses, and users of groundwater, and considering all of the other criteria required by Chapter 36 of the Texas Water Code, including without limitation the groundwater resource management duties and responsibilities of the GMA Districts individually and collectively, the GMA 16 Districts have adopted the desired future conditions for the aquifers) set forth below;

WHEREAS; In reference to GAM run 09-008, the committee has considered several scenarios during deliberation; and

WHEREAS, at said August 30, 2010, meeting, after a motion was duly made and seconded that the GMA 16 Districts adopt this resolution establishing desired future conditions for the Gulf Coast aquifer and declining to adopt a desired future condition for the aquifer slivers, the motion prevailed by the following vote:

9 Ayes, 0 Nays, 1 Absent, and 0 present not voting

A List of the votes by District is enclosed in Appendix B.


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July 24, 2012

NOW, THEREFORE, BE IT RESOLVED BY THE AUTHORIZED VOTING REPRESENTATIVES OF THE GMA 16 DISTRICTS AS FOLLOWS:


- 1 The above recitals are true and correct.
- 2 The authorized voting representatives of the GMA 16 Districts hereby establish a desired future condition of the Gulf Coast aquifer of a GMA-wide average drawdown of approximately 94 feet through 2060 consistent with scenario 10 of GAM run 09-008 by the vote reflected in the above recitals.
- 3 The authorized voting representatives of the GMA 16 Districts hereby decline to establish a desired future condition of the Carrizo-Wilcox, and the Yegua-Jackson aquifer slivers, finding them to not be relevant for purposes of GMA 16 joint planning at this time by the vote reflected in the above recitals.
- 4 The GMA 16 Districts and their agents and representatives, individually and collectively, are further authorized to take any and all actions necessary to implement this resolution.
- 5 The desired future conditions of the aquifer adopted by the GMA 16 Districts and attached hereto shall be effective immediately and shall continue in effect until amended, superseded, or repealed.

AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 30th day of August, 2010.



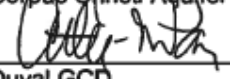
Bee GCD



Brush Country GCD



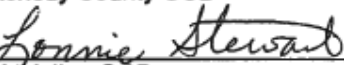
Corpus Christi Aquifer Storage & Recovery Conservation District



Duval GCD



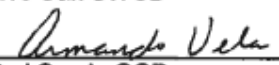
Kenedy County GCD



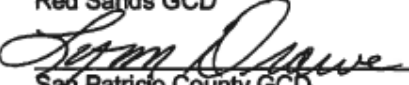
McMullen GCD



Live Oak UWCD



Red Sands GCD



San Patricio County GCD

Starr GCD

APPENDIX G

Estimated Historical Water Use
TWDB Historical Water Use Survey (WUS) Data

Groundwater use estimates are currently unavailable for 2005, 2009 and 2010. TWDB staff anticipates the calculation and posting of such estimates during the first half of 2012.

BROOKS COUNTY 72.01 % (multiplier) All values are in acre-feet/year

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1974	GW	943	30	0	1,175	27	629	2,804
1980	GW	818	6	0	216	133	67	1,240
1984	GW	1,099	6	0	97	114	53	1,369
1985	GW	1,016	6	0	180	114	48	1,364
1986	GW	1,306	6	0	360	0	55	1,727
1987	GW	805	0	0	360	127	57	1,349
1988	GW	872	0	0	360	212	58	1,502
1989	GW	995	0	0	202	104	58	1,359
1990	GW	828	0	0	252	104	58	1,242
1991	GW	785	0	0	522	100	60	1,467
1992	GW	886	0	0	432	100	45	1,463
1993	GW	870	0	0	259	96	45	1,270
1994	GW	984	0	0	335	91	42	1,452
1995	GW	1,078	0	0	335	91	41	1,545
1996	GW	1,149	0	0	335	91	44	1,619
1997	GW	1,818	0	0	335	91	45	2,289
1998	GW	2,010	0	0	335	91	37	2,473
1999	GW	1,420	0	0	335	91	39	1,885
2000	GW	1,420	0	0	18	91	54	1,583
2001	GW	1,402	0	0	18	91	105	1,616
2002	GW	1,264	0	0	175	91	53	1,583
2003	GW	1,162	0	0	513	366	44	2,085
2004	GW	1,161	0	0	450	366	51	2,028
2006	GW	1,096	1	0	406	0	323	1,826
2007	GW	1,007	1	0	225	0	307	1,540
2008	GW	1,434	0	0	471	0	236	2,141

HIDALGO COUNTY 1.61 % (multiplier) All values are in acre-feet/year

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1974	GW	73	9	0	302	18	21	423

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Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1980	GW	53	3	0	145	4	3	208
1984	GW	83	1	0	142	9	2	237
1985	GW	61	2	2	160	9	2	236
1986	GW	81	8	0	0	0	7	96
1987	GW	72	7	0	0	10	1	90
1988	GW	76	8	0	0	10	6	100
1989	GW	84	9	0	176	9	6	284
1990	GW	85	13	0	328	9	6	441
1991	GW	90	7	0	319	10	7	433
1992	GW	91	6	0	133	10	5	245
1993	GW	86	5	0	208	10	5	314
1994	GW	118	12	0	240	6	5	381
1995	GW	124	13	0	213	4	6	360
1996	GW	126	7	27	131	14	5	310
1997	GW	128	15	12	93	18	5	271
1998	GW	128	13	24	187	18	4	374
1999	GW	102	7	21	193	18	5	346
2000	GW	92	8	29	72	18	4	223
2001	GW	157	14	12	60	10	4	257
2002	GW	141	13	10	55	14	3	236
2003	GW	147	8	15	32	8	4	214
2004	GW	149	12	15	24	6	3	209
2006	GW	65	7	0	17	5	5	99
2007	GW	81	7	0	18	3	5	114
2008	GW	117	7	0	1	2	6	133

JIM HOGG COUNTY

100.00 % (multiplier)

All values are in acre-feet/year

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1974	GW	382	20	0	129	22	657	1,210
1980	GW	991	0	0	0	0	74	1,065
1984	GW	695	0	0	450	0	70	1,215
1985	GW	690	0	0	500	119	66	1,375

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Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1986	GW	571	0	0	500	0	55	1,126
1987	GW	497	0	0	500	238	50	1,285
1988	GW	497	0	0	500	217	54	1,268
1989	GW	249	0	0	120	41	54	464
1990	GW	585	0	0	150	41	52	828
1991	GW	818	0	0	150	28	54	1,050
1992	GW	986	0	0	150	28	88	1,252
1993	GW	815	0	0	31	27	88	961
1994	GW	775	0	0	313	27	69	1,184
1995	GW	683	0	0	313	27	69	1,092
1996	GW	896	0	0	313	27	76	1,312
1997	GW	354	0	0	313	27	76	770
1998	GW	836	0	0	313	27	58	1,234
1999	GW	598	0	0	313	27	58	996
2000	GW	854	0	0	817	27	51	1,749
2001	GW	890	0	0	758	27	78	1,753
2002	GW	789	0	0	758	27	27	1,601
2003	GW	873	0	0	500	27	35	1,435
2004	GW	802	0	0	500	28	34	1,364
2006	GW	833	0	0	500	32	408	1,773
2007	GW	833	0	0	417	22	423	1,695
2008	GW	907	0	0	562	77	346	1,892

JIM WELLS COUNTY *93.44 % (multiplier)* All values are in acre-feet/year

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1974	GW	1,513	55	0	2,723	561	1,054	5,906
1980	GW	2,336	0	0	2,802	227	170	5,535
1984	GW	2,320	0	0	2,474	364	88	5,246
1985	GW	2,167	0	0	1,752	219	80	4,218
1986	GW	2,191	0	0	2,336	0	77	4,604
1987	GW	2,056	0	0	2,261	396	75	4,788
1988	GW	2,202	0	0	1,997	378	75	4,652

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Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1989	GW	2,446	0	0	836	367	74	3,723
1990	GW	2,372	0	0	1,111	367	84	3,934
1991	GW	2,316	0	0	994	305	85	3,700
1992	GW	2,153	0	0	691	336	100	3,280
1993	GW	2,190	0	0	706	329	98	3,323
1994	GW	2,332	0	0	838	329	99	3,598
1995	GW	2,402	0	0	694	329	101	3,526
1996	GW	2,593	0	0	795	329	93	3,810
1997	GW	2,340	0	0	634	326	89	3,389
1998	GW	2,418	0	0	1,414	145	95	4,072
1999	GW	2,426	0	0	1,179	145	103	3,853
2000	GW	2,487	0	0	3,406	324	99	6,316
2001	GW	3,054	0	0	2,119	112	48	5,333
2002	GW	2,438	0	0	2,500	112	73	5,123
2003	GW	2,993	0	0	2,914	112	76	6,095
2004	GW	3,027	0	0	3,209	120	73	6,429
2006	GW	2,373	0	0	3,568	115	571	6,627
2007	GW	2,224	0	0	1,974	115	582	4,895
2008	GW	1,999	0	0	1,429	115	553	4,096

APPENDIX H

Projected Water Supply Needs TWDB 2012 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

BROOKS COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
N	COUNTY-OTHER	NUECES-RIO GRANDE	0	0	0	0	0	0
N	FALFURRIAS	NUECES-RIO GRANDE	0	0	0	0	0	0
N	IRRIGATION	NUECES-RIO GRANDE	0	0	0	0	0	0
N	LIVESTOCK	NUECES-RIO GRANDE	0	0	0	0	0	0
N	MINING	NUECES-RIO GRANDE	0	0	0	0	0	0
Sum of Projected Water Supply Needs (acre-feet/year)			0	0	0	0	0	0

HIDALGO COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
M	ALAMO	NUECES-RIO GRANDE	-59	-762	-1,548	-2,415	-3,407	-4,424
M	ALTON	NUECES-RIO GRANDE	0	0	-2,446	-3,419	-4,482	-5,602
M	COUNTY-OTHER	NUECES-RIO GRANDE	1,028	-2,179	-5,775	-9,722	-14,197	-18,779
M	COUNTY-OTHER	RIO GRANDE	60	-187	-409	-652	-927	-1,210
M	DONNA	NUECES-RIO GRANDE	1,729	1,435	1,117	759	347	-103
M	EDCOUCH	NUECES-RIO GRANDE	-129	-188	-255	-332	-420	-516
M	EDINBURG	NUECES-RIO GRANDE	6,216	3,826	1,029	-1,805	-5,151	-8,580
M	ELSA	NUECES-RIO GRANDE	659	603	534	460	364	258
M	HIDALGO	NUECES-RIO GRANDE	594	209	-219	-685	-1,206	-1,740
M	HIDALGO	RIO GRANDE	-2	-18	-20	-27	-49	-71
M	HIDALGO COUNTY MUD #1	NUECES-RIO GRANDE	-1,130	-1,814	-2,588	-3,421	-4,342	-5,287
M	IRRIGATION	NUECES-RIO GRANDE	-179,009	-127,739	-61,663	-64,971	-68,279	-71,333
M	IRRIGATION	RIO GRANDE	-14,526	-12,328	-9,540	-9,567	-9,594	-9,619
M	LA JOYA	NUECES-RIO GRANDE	46	-5	-59	-120	-189	-265
M	LA JOYA	RIO GRANDE	19	-2	-25	-51	-80	-113
M	LA VILLA	NUECES-RIO GRANDE	256	258	259	261	261	258
M	LIVESTOCK	NUECES-RIO GRANDE	0	0	0	0	0	0
M	LIVESTOCK	RIO GRANDE	0	0	0	0	0	0
M	MANUFACTURING	NUECES-RIO GRANDE	912	589	297	5	-255	-594
M	MCCALLEN	NUECES-RIO GRANDE	2,627	-2,501	-8,474	-14,830	-21,932	-29,453
M	MCCALLEN	RIO GRANDE	0	-1	-1	-2	-3	-4
M	MERCEDES	NUECES-RIO GRANDE	3,231	3,123	2,988	2,846	2,652	2,434

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RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
M	MILITARY HIGHWAY WSC	NUECES-RIO GRANDE	-8	-143	-422	-780	-1,120	-1,479
M	MILITARY HIGHWAY WSC	RIO GRANDE	0	0	0	0	-4	-9
M	MINING	NUECES-RIO GRANDE	183	182	181	179	177	175
M	MINING	RIO GRANDE	23	22	21	21	21	20
M	MISSION	NUECES-RIO GRANDE	-1,470	-4,468	-7,824	-11,365	-15,469	-19,674
M	NORTH ALAMO WSC	NUECES-RIO GRANDE	8,983	5,627	1,853	-2,345	-7,180	-12,150
M	PALMHURST	NUECES-RIO GRANDE	0	0	209	-296	-929	-1,633
M	PALMVIEW	NUECES-RIO GRANDE	0	0	0	0	-447	-906
M	PENITAS	NUECES-RIO GRANDE	5	3	2	-1	-7	-16
M	PHARR	NUECES-RIO GRANDE	376	-1,754	-4,152	-6,799	-9,649	-12,695
M	PROGRESO	NUECES-RIO GRANDE	0	0	0	0	0	0
M	SAN JUAN	NUECES-RIO GRANDE	-478	-1,642	-2,933	-4,361	-6,008	-7,697
M	SHARYLAND WSC	NUECES-RIO GRANDE	1,624	-391	-397	-1,331	-2,296	-3,335
M	STEAM ELECTRIC POWER	NUECES-RIO GRANDE	1,816	-1,980	-4,374	-7,291	-10,847	-15,183
M	SULLIVAN CITY	RIO GRANDE	159	186	184	13	-197	-411
M	WESLACO	NUECES-RIO GRANDE	1,043	286	-579	-1,537	-2,622	-3,787
Sum of Projected Water Supply Needs (acre-feet/year)			-196,811	-158,102	-113,703	-148,125	-191,288	-236,668

JIM HOGG COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
M	COUNTY-OTHER	NUECES-RIO GRANDE	-60	-66	-70	-73	-71	-65
M	COUNTY-OTHER	RIO GRANDE	-7	-7	-8	-8	-8	-7
M	HEBBRONVILLE	NUECES-RIO GRANDE	169	141	120	108	122	152
M	IRRIGATION	NUECES-RIO GRANDE	0	0	0	0	0	0
M	LIVESTOCK	NUECES-RIO GRANDE	0	0	0	0	0	0
M	LIVESTOCK	RIO GRANDE	0	0	0	0	0	0
M	MINING	NUECES-RIO GRANDE	8	5	4	3	2	1
Sum of Projected Water Supply Needs (acre-feet/year)			-67	-73	-78	-81	-79	-72

JIM WELLS COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
N	ALICE	NUECES-RIO GRANDE	0	0	0	0	0	0

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RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
N	COUNTY-OTHER	NUECES	0	0	0	0	0	0
N	COUNTY-OTHER	NUECES-RIO GRANDE	-167	-238	-262	-241	-210	-170
N	IRRIGATION	NUECES	0	0	0	0	0	0
N	IRRIGATION	NUECES-RIO GRANDE	0	0	0	0	0	0
N	LIVESTOCK	NUECES	0	0	0	0	0	0
N	LIVESTOCK	NUECES-RIO GRANDE	0	0	0	0	0	0
N	MINING	NUECES	0	0	0	0	0	0
N	MINING	NUECES-RIO GRANDE	0	0	0	0	0	0
N	ORANGE GROVE	NUECES-RIO GRANDE	0	0	0	0	0	0
N	PREMONT	NUECES-RIO GRANDE	0	0	0	0	0	0
N	SAN DIEGO	NUECES-RIO GRANDE	0	0	0	0	0	0
Sum of Projected Water Supply Needs (acre-feet/year)			-167	-238	-262	-241	-210	-170

APPENDIX I

Projected Water Management Strategies
TWDB 2012 State Water Plan Data

BROOKS COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
FALFURRIAS, NUECES-RIO GRANDE (N)							
MUNICIPAL WATER CONSERVATION	CONSERVATION [BROOKS]	1	38	95	156	228	309
Sum of Projected Water Management Strategies (acre-feet/year)		1	38	95	156	228	309

HIDALGO COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
ALAMO, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	5	10	14	19	24
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	100	200	277	381	471
ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	400	800	1,330	1,700	2,100
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	25	25	25	25	125	225
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	0	83	288	469	882	1,304
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	34	150	225	300	400	500
ALTON, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	59	82	2,446	3,419	4,482	5,602
COUNTY-OTHER, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	1,090	3,888	5,860	10,099	14,390
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	94	257	395	554	736	942
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	1,089	1,887	3,861	4,098	4,389

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
COUNTY-OTHER, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	187	409	652	927	1,210
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	50	100	200	300	400	483
DONNA, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	15	32	51	72	95	118
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	0	50	50	50	50	50
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	25	25	25	25	25
EDCOUCH, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	65	118	175	246	299	360
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	65	70	81	86	121	156
EDINBURG, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	1,631	3,114	4,591	6,619
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	74	328	500	686	889	1,097
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	0	0	500	1,500	3,000	4,000
ELSA, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	50	50
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	2	5	7	10	14	17
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	0	100	100	100	100	100
PROPOSED ELEVATED STORAGE TANK AND INFRASTRUCTURE IMPROVEMENTS FOR CITY OF ELSA	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	105	105	105	105	105	105
HIDALGO, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	8	29	51

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	154	558	973
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	32	66	104	145	189	235
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	110	235	334	427	506	585
HIDALGO, RIO GRANDE (M)							
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	2	18	20	27	49	71
HIDALGO COUNTY MUD #1, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	66	100	139	181	227	274
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	1,051	1,684	2,401	3,173	4,026	4,901
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	14	30	48	68	89	112
IRRIGATION, NUECES-RIO GRANDE (M)							
IRRIGATION CONVEYANCE SYSTEM CONSERVATION	CONSERVATION [HIDALGO]	5,976	20,246	34,268	48,044	61,572	74,904
ON- FARM WATER CONSERVATION	CONSERVATION [HIDALGO]	795	5,385	13,673	25,560	40,946	59,773
IRRIGATION, RIO GRANDE (M)							
IRRIGATION CONVEYANCE SYSTEM CONSERVATION	CONSERVATION [HIDALGO]	62	207	354	498	639	779
ON- FARM WATER CONSERVATION	CONSERVATION [HIDALGO]	8	56	142	265	425	621
LA JOYA, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	2	87	185
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	7	14	21	49	62	73
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	50	48	75	69	40	7
LA JOYA, RIO GRANDE (M)							
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	0	2	25	51	80	113

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
LA VILLA, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	0	1	1	1	1	1
MANUFACTURING, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	55	194
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	0	0	0	100	200
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	0	0	0	0	100	200
MCALLEN, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	225	329	393	432
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	998	4,083	5,718	7,341
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	191	382	925	1,250	2,177	3,423
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	3,360	3,360	6,139	6,600	8,121	8,821
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	0	487	619	945	1,543
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	0	0	0	2,349	5,578	9,893
MCALLEN, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	1	1	2	3	4
MERCEDES, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	7	14	23	32	43	53
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	560	560	560	560	560	560
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	560	560	560	560	560
MILITARY HIGHWAY WSC, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	5	14	16	18

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	139	353	561	789
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	8	18	28	38	43	47
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	125	250	375	500	625
MILITARY HIGHWAY WSC, RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	0	0	0	0	4	9
MISSION, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	299	2,633	4,901	7,236	10,014	12,118
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	260	637	598	789	1,394	2,135
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	560	560	560	560	560	560
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	352	839	1,765	2,780	3,909	5,321
NORTH ALAMO WSC, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	0	48
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	0	902
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	248	538	863	1,215	3,098	4,000
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	11,201	11,201	11,201	11,201	11,201	11,201
PALMHURST, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	15	46	82
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	281	883	1,551
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	32	68	110	155	203	254

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
PALMVIEW, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	22	45
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	425	860
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	16	34	55	78	102	128
PENITAS, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	1	1	2	2	7	16
PHARR, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	89	205	311	423	554
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	698	2,478	4,721	7,086	8,895
ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	400	766	928	1,067	2,003
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	143	392	478	589	798	943
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	100	150	175	200	225	250
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	50	50	50	50	50	50
PROGRESO, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	11	24	38	54	71	89
SAN JUAN, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	24	82	147	218	300	385
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	454	1,560	2,786	4,143	5,708	7,312
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	95	206	330	465	612	762

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WUG, Basin (RWPG)		All values are in acre-feet/year					
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
SHARYLAND WSC, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	20	20	67	115	167
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	372	377	1,264	2,181	3,168
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	29	62	100	141	186	231
STEAM ELECTRIC POWER, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	980	2,374	3,291	3,847	5,183
NON-POTABLE REUSE	DIRECT REUSE [HIDALGO]	0	1,000	2,000	4,000	7,000	10,000
SULLIVAN CITY, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	10	21
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	186	390
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	11	25	39	55	73	91
WESLACO, NUECES-RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	0	100
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	0	100
ADVANCED WATER CONSERVATION	CONSERVATION [HIDALGO]	44	82	124	217	793	1,048
BRACKISH WATER DESALINATION	GULF COAST AQUIFER-BRACKISH [HIDALGO]	100	100	100	100	250	350
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [HIDALGO]	0	0	0	100	429	899
POTABLE REUSE	DIRECT REUSE [CAMERON]	1,120	1,120	1,120	1,120	1,150	1,290
Sum of Projected Water Management Strategies (acre-feet/year)		28,037	61,436	109,705	165,287	233,014	306,209

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JIM HOGG COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
COUNTY-OTHER, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [JIM HOGG]	0	1	1	1	1	1
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [JIM HOGG]	60	66	70	73	71	65
COUNTY-OTHER, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	7	7	8	8	8	7
HEBBRONVILLE, NUECES-RIO GRANDE (M)							
ADVANCED WATER CONSERVATION	CONSERVATION [JIM HOGG]	2	4	6	8	7	6
Sum of Projected Water Management Strategies (acre-feet/year)		69	78	85	90	87	79

JIM WELLS COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
ALICE, NUECES-RIO GRANDE (N)							
MUNICIPAL WATER CONSERVATION	CONSERVATION [JIM WELLS]	50	133	219	306	438	585
COUNTY-OTHER, NUECES-RIO GRANDE (N)							
GULF COAST AQUIFER SUPPLIES	GULF COAST AQUIFER [JIM WELLS]	565	565	565	565	565	565
ORANGE GROVE, NUECES-RIO GRANDE (N)							
MUNICIPAL WATER CONSERVATION	CONSERVATION [JIM WELLS]	3	8	14	18	28	38
PREMONT, NUECES-RIO GRANDE (N)							
MUNICIPAL WATER CONSERVATION	CONSERVATION [JIM WELLS]	9	22	36	49	70	92
Sum of Projected Water Management Strategies (acre-feet/year)		627	728	834	938	1,101	1,280